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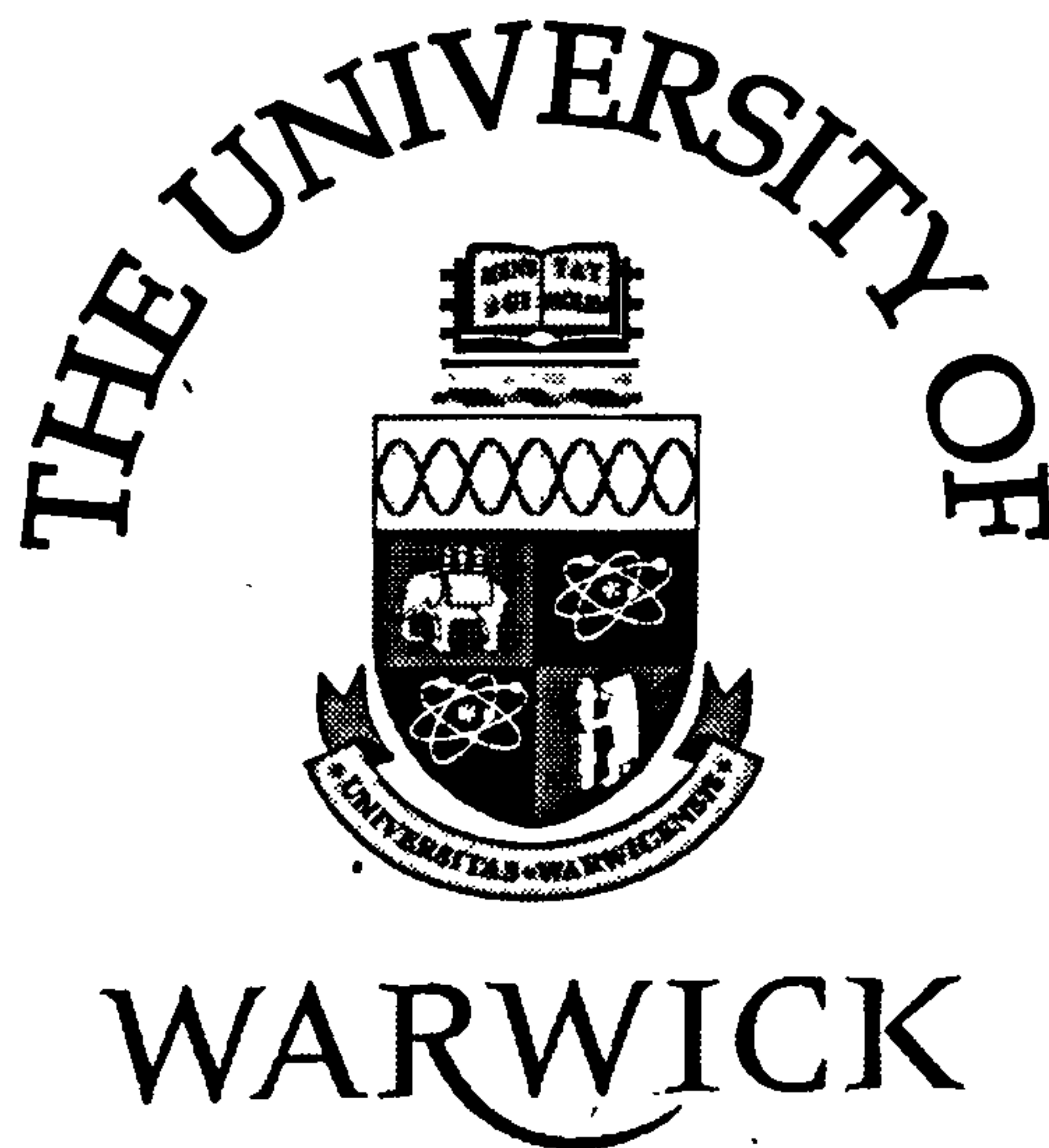
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Knowledge Sharing in the Introduction of a New Technology:

Psychological Contracts, Subculture Interactions and Non-
codified Knowledge in CRM Systems

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A dissertation in fulfilment of the requirements for the degree of Doctor
of Philosophy at Warwick Business School, University of Warwick



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Abbreviations

ACD	Automatic Caller Distribution
API	Application Programming Interface
B2B	Business To Business
B2C	Business To Customer
BCC	Birmingham City Council
BPR	Business Process Re-engineering
CEO	Chief Executive Officer
CIO	Chief Information Officer
COBOL	Common Business Orientated Language
CSA	Customer Service Advisor
CTI	Computer Telephony Integration
CRM	Customer Relationship Management
DMS	Document Management System
EAI	Enterprise Application Integration
E- Business	Electronic Business
E-Government	Electronic Government
ERP	Enterprise Resource Planning
Connect	A middleware that connects the front-office systems with back-office systems
CTI	Computer Telephony Integration
IBM	International Business Machines
ICT	Information and Communication Technology
IEG	Interactive Electronic Government
IS	Information System
IT	Information Technology
ITSR	Inside Territory Sales Representative

IVR	Interactive Voice Response
JAD	Joint Application Design
MBAS	Multi Benefit Assessment System
PC	Personal Computer
PDT	Pre Deployment Team
RDBMS	Relational Database Management Systems
SAP	Systems Applications and Products in Data Processing
SDLC	System Development Life Cycle
SFA	Sales Force Automation
SSM	Soft System Methodology
STS	Social Technical System
TSR	Tele Sales Representative

Declaration

This thesis is presented in accordance with the regulations for the degree of Doctor of Philosophy. The work presented in the thesis is entirely original unless otherwise indicated. Furthermore, this thesis has not been previously submitted for a degree at this or any other university. The interpretations in the thesis do not represent the view of our studied organisations or Warwick Business School. The interpretations are hence the sole responsibility of the author.

Three papers were accepted for publication before the submission of the thesis:

Paper 1: Finnegan, D and Willcocks L. (2004). Knowledge management in the introduction of CRM Systems: Tacit/non-codified knowledge transfer, subcultures and impacts Proceedings of The International Management Technology Conference, Orlando Florida, USA

Paper 2: Finnegan, D. and Willcocks, L. (2005). Knowledge Issues in the Introduction of CRM Systems: Tacit Knowledge, Psychological Contracts, Subcultures and Impacts. Proceedings of The European Conference in Information Systems, Regensburg, May.

Paper 2 is available online through London School of Economics at the following address:
<http://is.lse.ac.uk/asp/aspecis/20050003.pdf>

Paper 3: Knowledge Issues in the Implementation of CRM Systems. *Journal of Enterprise Information Management*. Scheduled to appear in Volume 19(6), 2006.

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Abstract

This longitudinal comparative study using a multidisciplinary approach, applies a processual analysis (Pettigrew, 1985; Pettigrew, 1990; Pettigrew, 1997) from a knowledge sharing perspective, to the implementation of what the literature shows to be a relatively under-researched area of Customer Relationship Management (CRM) systems in contemporary (2001-2004) situations within Birmingham City Council and IBM. A specific focus is given to areas neglected in previous CRM studies - sub-cultures, psychological contracts, how tacit/non-codified knowledge is surfaced and shared, and with what effects on implementation. It investigates how the system stakeholders and the information system (IS) itself evolved through encountering barriers, sharing knowledge, finding new uses and inventing work-arounds. A rich picture emerges of how sub-cultural silos of knowledge linked with psychological contracts and power-based relationships influence and inhibit adoption and acceptance of the CRM system. A major contribution of this processual study is to focus on the relatively neglected 'R' in CRM systems implementations.

Hitherto, there has been little attempt to analyse the micro elements in the implementation of CRM systems using the lens of a multidisciplinary approach in a longitudinal study. The investigation of knowledge sharing (in particular non-codified knowledge sharing) across the key sub-cultures in the implementation process of CRM systems remains understudied. Scholars such as Lawrence and Lorch (1967), Boland and Tenkasi (1996), Newell et al. (2002) and Iansiti (1993) write of 'knowing of what others know', 'mutual perspective taking', 'shared mental space' and 'T-shaped skills', as aids to tacit /non-codified knowledge sharing. However, they do not address fully the micro processes that lead to the above. This research aims to fill this knowledge gap, by investigating the micro elements (including in our study the psychological contracts) that lead to 'mutual perspective taking', enabling tacit/non-codified knowledge sharing across the key sub-cultures and their impacts on the adaptation and acceptance of a CRM system.

This processual study lays a strong foundation for further research along the route of investigating multiple micro level elements in the process of implementation of a CRM system in order to enhance understanding of such phenomena in a contemporary situation. This qualitative study compares the CRM implementations at IBM.COM and Birmingham City Council. It penetrates the knowledge sharing issues faced by practitioners in a system integration environment. We highlight and discuss the importance of psychological contracts and their interdependencies on sub-cultural interactions and knowledge sharing. We have been able to relate and discuss real life issues in the light of existing academic theories, in order to enhance our understanding of the relatively neglected knowledge sharing phenomena in a CRM environment. The processual analysis framework extensively used and further developed in this research provides keys to its further use in enhancing the richness of future IS implementation studies at a micro level.

The research contributes to the study of IS development by providing an integrative approach investigating the existing academic understandings at a micro level in a contemporary situation. A major contribution is also a detailed insight into the process of Boland and Tenkasi's (1996) 'mutual perspective taking' through the investigation of psychological contracts and their interdependencies on sub-cultural interaction and knowledge sharing. An interesting finding has been that the distinctive contexts of the two cases have had lesser effects than the distinctive nature of CRM Systems and the implementation processes adopted. The study shows that irrespective of sectoral backgrounds the two organisations studied in this research failed to address adequately a range of common issues related to human behaviour, psychology, organisational characteristics, sub-cultural interactions and knowledge sharing. According to our research findings these factors have greater explanatory power for the results achieved than the distinctive contexts in which the two organisations operated.

Chapter One

Introduction

1.1 Introduction

The concept of Information Technology (IT) implementation has been discussed and critically analysed over decades. However, the literature available both at academic and practitioner level focuses predominantly on the macro issues faced in the big picture of the implementation lifecycle of a new technology. Identifying the micro elements in the small picture is vital for a successful implementation of a new technology. Since the 1990s the issue of knowledge management and its linkage with Information System (IS) strategy literature has become more important. The arrival of enterprise systems such as Enterprise Resource Planning (ERP) pushed organisations towards system integration and made them rethink their knowledge management strategies in order effectively to transfer information across their various business units. Currently organisations are moving away from a 'part technology' (mainly focused on independent systems without any considerations of holistic system integration) strategy towards a system integration strategy.

The arrival of CRM (Customer Relationship Management) systems has reinforced the importance of knowledge management and its linkages with IT implementation. As per 2004 CRM systems were facing serious implementation draw backs (Ciborra, 2000; Tafti, 2002) and remain relatively understudied. Knowledge sharing issues at the micro level across key sub-cultures in the implementation of CRM system also remain understudied. This processual study seeks to fill this gap by investigating the knowledge sharing enablers and inhibitors across key sub-cultures in the implementation process of a Customer Relationship Management (CRM) system. It consists of a longitudinal comparative study of the implementation of CRM systems at IBM (with a particular focus on IBM.COM UK) and Birmingham City Council.

This multidisciplinary processual research attempts to integrate existing IT implementation theories with studies on softer issues like subculture interactions, non-codified knowledge sharing and psychological contracts in a CRM setting. It attempts to critically analyse knowledge sharing in the implementation process of CRM systems and how it might relate to, or be different from, other IT

systems. A special focus is given to sub-cultures and how tacit/non-codified knowledge is shared and with what effect on the implementation of a CRM system. We review the current literature and research objectives in the following section (1.2). We then discuss the research methodology outlined in section 1.3. The following section (1.4) outlines the contribution of our research findings and lastly in section 1.5 we summarise the structure of this study.

1.2 Current literature and research objectives

Information technology is pervasive in many industries and is clearly reshaping some. It has a very strong impact on organisational culture (Alvesson, 2002; Claver et al., 2001). It affects the whole cultural web of an organisation, reshaping and transforming it accordingly. Unquestionably, information systems (IS), along with their supporting information technology (IT), continue to increase in importance in nearly all organisations. As organisations work hard to develop and apply IT in new ways, the need to identify and implement an IS strategic plan becomes increasingly critical.

To date, however, implementations of IS strategies have not had high success rates. Though this has been true for years, much continues to be published on how to develop an IS strategy. Increasingly organisations are investing in IT. Business process engineering has taken place with rapid developments (Davenport, 1993). Organisations have updated their technical systems rapidly. IT is becoming the core of the business process content setting. This technical innovation in the business process is often implemented with little or no regard to the end-users/internal customers (internal customers are the in-house end-users of the system interacting with external customers using the system), the impact on job roles, job satisfaction and subsequent ability to serve the external customer. A lack of interaction between the decision makers, the IT experts and the customers (internal as well as external) during the implementation process of IT systems, results in systems being less efficient and user friendly. While implementing the business process using IT as a tool the human engineering side of it is ignored.

There is a consensus over the importance of understanding the implementation process. Over the years several attempts to explore different elements of the implementation process have been made. The existing implementation studies, including Rogers' (1995) stages of relative advantage, compatibility, complexity, trialability & observability and Kwon and Zmud's stage model (1987) adaptation, acceptance, routinisation and infusion, discuss the implementation process of an IT system at a macro level.

Furthermore, the links between stakeholders' perceptions (based on the differential interests, expectations and power (Long and Fahey, 2000)) and the implementation process of a CRM system have not yet been explored. This research attempts to investigate the 'R' of the CRM implementation from a knowledge management perspective. The focus is narrowed down to the knowledge sharing enablers and inhibitors in connection with the roll out of a new CRM system. The studies investigating the implementation process of an IT system are outdated or give only a one sided view. This research treats technologies and organisations as mutually dependent and dynamically emergent. There is still much opportunity for the IS field to move beyond a relatively simple black-boxed view of technology towards a more powerful conceptualisation of the role of IT artefacts in organisations (Markus and Robey, 1988). Furthermore, Orlikowski and Iacono (2001) after reviewing numerous (N = 188) articles, argue the need to put technology back into the study of information systems.

Davidson (2002) argues how frames and shifts in frame salience (frames are cognitive structures or mental models that are held by individuals) influence sense-making during requirement determination. This study helps to understand how interpretive power is exercised in an IS project. Moving on from frames to shared frames, Orlikowski and Gash (1994) show shared frames as closely related to the concept of sub-cultures. Individuals -drawing on their shared frames - engage in symbolic action and thereby construct a social reality that reflects their common assumptions, beliefs and understandings and that includes particular rules, rituals and customary practice. According to Geertz (1973) and Van Maanen and Barley (1985), sub-cultures rely heavily on cognitive elements such as common frames of reference. The perceptions of different stakeholders and their linkages with knowledge sharing across

the sub-cultural boundaries in the implementation process of the CRM system is an important factor, and needs to be critically analysed.

Scholars (Alvesson, 2002; Claver et al., 2001; Agar, 1994; Burns and Stalker, 1961) argue to make a case for the importance of culture during the implementation of an IT system. There is a consensus over the culture gap that exists between the IT experts and the users/business experts and that this is delaying the implementation (Bloomfield and Vurdubaki, 1994; Waterhouse, 1991, 1992; Fincham, 1994; Grindley, 1991; Hinton, 1994; Kumar and Bjorn-Andersen, 1990). Yet there is very little mentioned regarding knowledge sharing across different hierarchical sub-cultures and its impact on the adaptation of a CRM system. An investigation initially identifying the key sub-cultures in a CRM environment and then mapping the knowledge sharing process across them should produce a rich picture of the knowledge sharing phenomena in a contemporary situation.

Scholars such as Van-Maanen (1986) state informal settings can aid/facilitate the sharing of knowledge across sub-cultures, but much still needs to be investigated about how to attain Boland Tenkasi's (1996) 'mutual perspective taking'. Some scholars argue that psychological contracts play an important role in the outcome of an interaction between individuals, though no link has been established between knowledge sharing and psychological contracts.

The current system integration trends investigated by Ross (2003) neglects fully to address the micro level socio cognitive issues related to knowledge sharing mechanisms across the sub-cultural boundaries. Cognitive issues such as unwritten expectations – the outcome of a tacit agreement between individuals – can play important role in the sharing of non-codified/tacit knowledge across the sub-cultures in an organisation. According to Rousseau (1995), a psychological contract is an unwritten set of expectations between everyone in an organisation and, unlike the written contract, is constantly changing. Many scholars (Anderson and Schalk, 1998; Makin et al., 1996; Rousseau, 1995; Shore and Barksdale, 1998; Thibaut & Kelley, 1959) argue that psychological contracts play an important role in the outcome of interaction between individuals. We investigate the linkages between

the sub-cultural interaction, psychological contracts and non-codified knowledge sharing in the implementation process of a CRM system.

Scholars (Lawrence and Lorch, 1967; Boland and Tenkasi, 1996; Newell et al., 2002; Iansiti, 1993) talk about ‘knowing of what others know’, ‘mutual perspective taking’, ‘shared mental space’ and ‘T-shaped skills’, as aids to tacit knowledge/non-codified sharing. However they do not address the micro processes that lead to a ‘mutual perspective taking’ and the rest. This research aims to fill this knowledge gap by investigating the micro elements (in our study the psychological contracts) that lead to a ‘mutual perspective taking’ enabling tacit knowledge sharing across key sub-cultures and its affect on the adaptation and acceptance of a CRM system.

1.3 Research Aim, Questions and Objectives

The aim of this research is to use a multidisciplinary longitudinal approach in enhancing the understanding of non-codified knowledge sharing mechanisms using the lens of psychological contracts in the implementation process of a CRM system. The specific initial research question:

‘How is tacit/non-codified knowledge surfaced and shared across key sub-cultures and with what effect on the adaptation and acceptance of a CRM system?’

Research Objectives:

- To analyse critically the existing implementation theories.
- To identify and define the role of sub-cultures in the implementation process.
- To assess the role of non-codified knowledge and its significance in the implementation process of an IT system.
- To assess knowledge sharing aids/barriers across sub-cultures and their impact upon implementation.
- To test the methodology and refine the reviewed literature and research question by conducting a pilot/initial analysis at both sites.

- To assess the role of psychological contracts and its linkages with knowledge sharing and subculture interactions.
- To analyse critically the implementation of a CRM system from a knowledge sharing perspective.

To achieve these objectives, stakeholders of the system needed to be identified. The key sub-cultures of stakeholders were also identified. Modes of stakeholder interaction from different sub-cultures were investigated closely. This was carried out in terms of whether the interaction had a broad or a narrow base. Senior management and grass root involvement was investigated. This included the external customers. The benefits of such an involvement were discussed. Stakeholders' perceptions, interests and expectations were identified. Differing stakeholders' perceptions regarding the effectiveness of CRM systems from both sites were compared and their causes discussed.

1.4 Research Methodology

We chose to use a comparative longitudinal approach as stated by Pettigrew (1985, 1990 and 1997) because of its suitability to the nature of our research. This framework is used extensively extending and deepening its value in gathering data at different intervals from our two research sites, namely Birmingham City Council and IBM.COM. The CRM implementation was investigated by critically analysing the CRM implementation processes at our research sites over a period of three years.

We have also chosen our research sites from different sectors following Pettigrew (1989) and Willcocks L. and Harrow J. (1992) in order to provide a good comparison of the knowledge sharing patterns (deviating and similar) at the research sites. The multidisciplinary approach lens used provides a useful tool to elucidate the micro elements in this research, namely psychological contracts, in order to enhance the validity of our approach. By using a longitudinal approach in following the two CRM projects at our research sites we have been able to add to the richness of Pettigrew's framework. The framework was refined and further developed in order to address the real life issues in a pilot study. We conducted a pilot as part of our processual analysis at both sites in order to get closer to the micro level processes in both CRM projects. The pilot /initial analysis helped us to refine the research

question, the reviewed literature, and our analytic framework and tested the proposed methodology. Additional reviews were conducted in parallel to the initial analysis to investigate further the phenomena at micro level. The refined framework was used to gather the final set of data and analyse the same. We discuss the methodology in detail in our methodology and pilot chapters.

1.5 Contribution to knowledge and research benefits

The research will potentially benefit organisations where CRM (Customer Relationship Management) systems are implemented on a large scale, in that it highlights the significance of the micro mechanisms important to an implementation process. The topic aims to provide information that will facilitate deeper practitioner and researcher understanding of CRM systems implementation processes from a knowledge management perspective. The contribution of the PhD will be further to integrate diverse areas relevant to understanding the implementation process with a particular focus on CRM.

Different scholars talk about ‘knowing of what others know’, ‘mutual perspective taking’, ‘shared mental space’ and ‘T-shaped skills’, as aids to tacit knowledge sharing across the sub-cultures and yet they do not address the psychological micro mechanisms that lead to the above. This research aims to fill this knowledge gap by investigating the micro elements that lead to a ‘mutual perspective taking’ thus facilitating tacit/non-codified knowledge sharing across key sub-cultures and its impact on the adaptation and acceptance of a CRM system.

1.6 An outline of the thesis

Following this introductory chapter, the thesis structure is as follows. The study is carried out in two phases. Phase 1, the secondary research, includes the literature review (chapter 2) which establishes and confirms existing knowledge and enables the formulation of research questions based on the themes emerging from the review.

Chapter three introduces the research methodology. We discuss scientific rationale critically analysing Burrell and Morgan and challenging the argument that locating inside any one paradigm forecloses the possible use of the other – the incommensurability argument (Mingers and Gill, 1997). Then under the section of research design we discuss the choice of sector and sites, data collection, interviews and data analysis, followed by the limitations of this research.

Interview guidelines are then constructed to collect empirical data from the field, in a pilot study, as a first cycle of the processual analysis (Pettigrew, 1997). The results obtained from IBM.COM and Birmingham City Council are compared against each other, and evaluated in an initial analysis in chapter four, in order to deepen our understanding of the implementation process of a CRM system and the issues faced. The pilot helped us to not only refine the reviewed literature but also enabled the refining of the final data gathering framework and the methodology selected. Continuing with Pettigrew's inductive deductive cycles, final data is gathered and discussed in chapters, five and six in a within-case analysis in the second cycle. Chapter seven presents the cross-case analysis using our improvised version of Pettigrew's (1985, 1990) frame work. In the first part we critically analyse and compare the process of implementation of CRM systems from our contemporary situations, comparing issues such as staff stability, user commitment, user training and management support. We then compare the knowledge sharing issues using our framework of interdependencies between subculture interaction, psychological contracts and knowledge sharing. In the second part of chapter seven we use Willcocks and Harrow's (1992) contextual analysis framework in order to compare the similarities and deviations in the CRM implementation processes from our two research sites. We show how the distinctive contexts of the two cases have had lesser effects than the distinctive nature of CRM Systems and the implementation processes adopted. Our contextual analysis shows that irrespective of sectoral backgrounds the manner in which the two organisations studied in this research failed to address adequately a range of common issues related to human behaviour, psychology, organisational characteristics, sub-cultural interactions and knowledge sharing. According to our research findings these factors have greater explanatory power for the results achieved than the distinctive contexts in which the two organisations operated.

Chapter eight presents the conclusion of the findings of this research focussed on the implementation of a new technology, namely Customer Relationship Management (CRM) system, from a knowledge management perspective in contemporary (2001-2004) situations within Birmingham City Council and IBM.COM. We also discuss the three main contributions namely, theoretical, methodological and managerial in this chapter. Finally, we discuss limitations and reflections highlighting the directions for further research. We admit that although we attempted to capture the reality of knowledge sharing phenomena in a CRM setting, our research could only capture a snapshot of it due to its limitations. We discuss these limitations and suggestions for future research at the end.

In the following chapter we discuss the reviewed literature and reveal the literature gaps. We also highlight the literature considered and the reason for choosing the specific five areas reviewed. These five areas follow Pettigrew's framework reviewing the trends in IS implementations and its linkages with subculture gaps and knowledge sharing.

Chapter Two

Literature Review

2.1 Introduction

The literature review aims to discuss and analyse critically the existing academic understanding of IT systems implementation processes and their role and impact in organisational cultures. There are five research literatures relevant to this study, that can usefully be brought together to provide a lens for analysing our selected case history. These studies cover IT implementation, organizational cultures and sub-cultures, knowledge and its sharing, psychological contracts, and Customer Relationship Management (CRM) systems. This chapter will consider and critique each in turn. The review uses Pettigrew's (1985, 1990) framework as the basis to analyse the existing implementation theories, linking them with organisational culture, knowledge management and psychological contracts as one of the key ingredients in the internal context (Pettigrew, 1985, 1990, 1997). It will identify key sub-cultures and will discuss subculture gaps from a knowledge management perspective. It will assess the roles of knowledge and its transfer across the key sub-cultures. It will also assess knowledge sharing aids/barriers across key sub-cultures and the impact of these aids/barriers upon implementation. It will investigate the impact of psychological contracts and subculture interactions on knowledge sharing in the implementation of CRM (Customer Relationship Management) systems. A CRM environment suits the investigation of knowledge sharing issues. This is because it is so dependent on the transfer of knowledge from the back to the front-office, which is essential in giving a good service to the external customers and achieving successful resolutions of customer queries. An investigation of psychological contracts and their interdependencies with subculture interaction and knowledge sharing will enhance our understanding regarding the successes and failures of customer queries.

We have also considered literatures from the political science arena and their relevance to our research area. However, we find that it will only expand our literature review chapter. Also we find that using scholars such as Geert Hofstede with their linkages with cultural studies will expand the culture part of our literature and do injustice to the knowledge part. Sometimes Hofstede claims to have identified differences between national cultures and sometimes claims that he has identified those cultures. The focus of his analysis of the IBM questionnaire data is on differences. But

relying on that analysis he often refers to absolute and not comparative characteristics of specific national cultures. We also think that the cultural dimensions as suggested by Hofstede deliver a rather ambiguous message regarding culture, and may not suit our study which intends to place its emphasis on knowledge sharing issues. We have used Schein, however, who has elaborated on Hofstede's work and suits this study with its linkages with knowledge sharing. Knowledge sharing phenomena across the subcultural boundaries in a CRM system are highly dependent on understanding previous implementation theories and their linkages with culture and knowledge. We are reviewing the five areas as mentioned earlier in our literature in order to probe more deeply into the knowledge sharing issues by using Pettigrew's framework. These areas allow us to make the linkage between subculture interaction and knowledge sharing in a CRM environment. By choosing the specific literature areas we also attempt to prove that CRM is just another IS system. Previous IS literature can be highly important in understanding knowledge issues in the implementation of a CRM. We also attempt to integrate the psychological contracts literature with that of IS implementation in providing a multidisciplinary lens to probe the knowledge sharing phenomena at a micro level.

The themes emerging as a result of the review will be used to construct an analytic framework. The analytical framework will guide the data collection and analysis in a pilot study as part of our processual analysis (Pettigrew, 1997). The results of this analysis will then be used to revise and expand the framework as necessary to better reflect the pilot results. The revised framework and the refined research questions can then form the basis for further empirical work. The diagram (Figure 2.1) below provides a summary of the literature reviewed and highlights the five areas studied. At the top is the IS implementation and its linkages with culture. Further down on the left-hand side are the subculture and subcultural gap scholars. Moving across right is the knowledge management section. This is also where we make the link between knowledge sharing, subcultures and psychological contracts. Finally we make the linkage between knowledge sharing, subcultures and psychological contracts within CRM systems. We discuss and critique the five literatures reviewed on the following page.

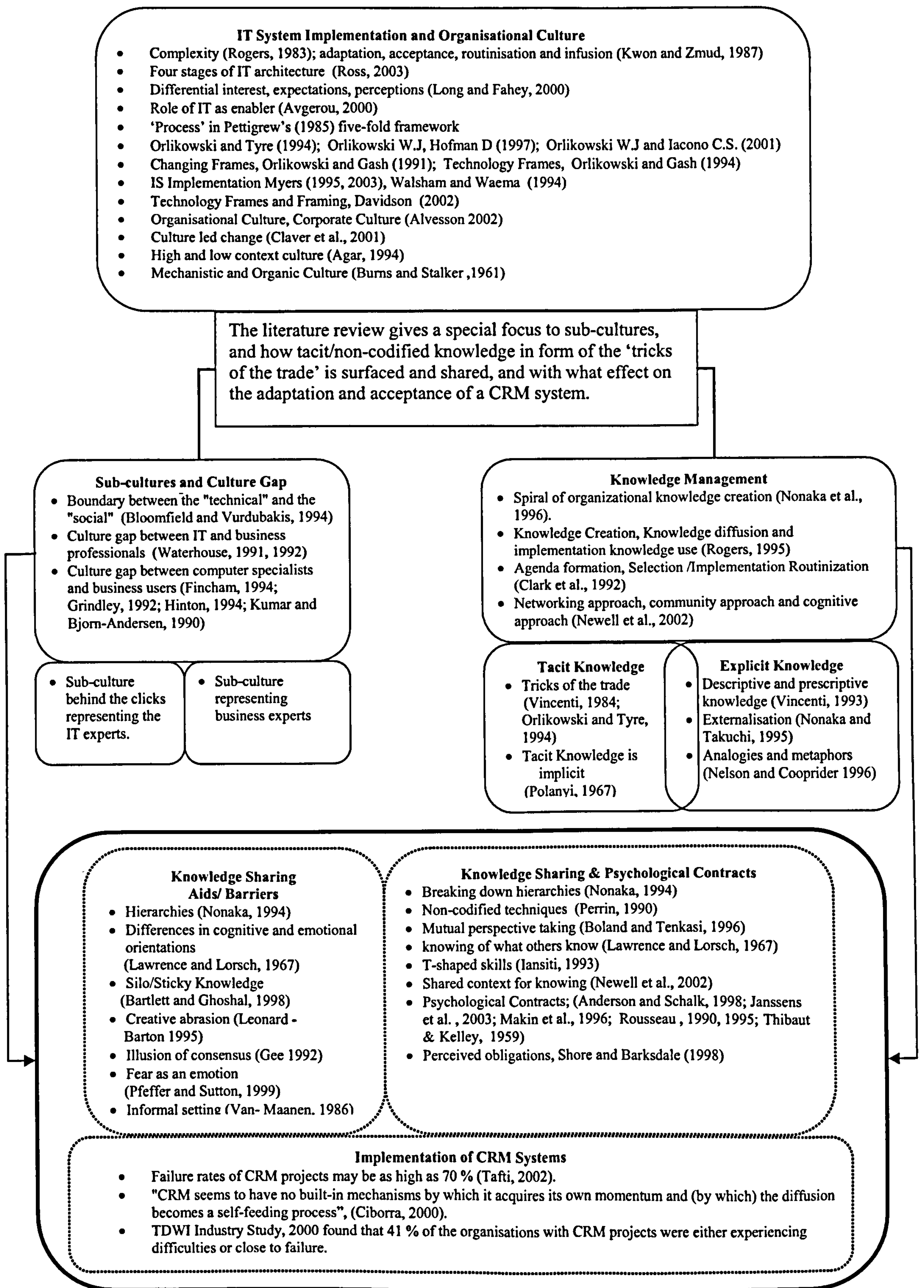


Figure 2.1 Summary of the literature review

2.2 IT system implementation and organisational culture

The introduction of Information Technologies clearly impacts on organisational behaviour, and consequently culture. It affects the whole cultural web of an organisation, reshaping, reinforcing and transforming it accordingly (Claver et al., 2001). Information systems (IS – business applications), along with supporting information technology (IT – supply of technologies), continue to have operational impacts in all organisations. As organisations work to develop and apply IT in new ways, the need to identify and implement an IS strategic plan becomes increasingly critical. To date, however, implementations of IT systems have had mixed success rates with typically 30% of implementations reporting no net benefits from IT investments (Willcocks and Graeser, 2001).

Rogers (1995) has synthesized over 1500 studies into a theory of innovation diffusion. According to him, diffusion is a process by which an innovation is communicated through certain channels over time among the members of a social system. He further identified five conceptual characteristics of innovations that help explain differences in adoption rates: relative advantage, compatibility, complexity, trialability and observability. Rogers recognizes that diffusion is strongly related to time. The research literature supports strongly the first three conceptual characteristics as major determinants of success or failure of IS (information systems) defined typically in terms of IS usage and/or user satisfaction with the system (Cooper and Zmud, 1990; Kwon and Zmud, 1987; Tornatzki and Klein, 1982). A stage model is developed by Kwon and Zmud (1987) into six stages: initiation, decision, adaptation, acceptance, routinisation and infusion, thus recognizing that diffusion is a process that will evolve and materialize gradually. The focus of this research is more on adaptation and acceptance and knowledge sharing issues during these two phases in the implementation of a CRM system. A close understanding of the process of adaptation is critical for several reasons. First, users adaptation to technologies in use often help to shape further development and research activities (Dutton and Thomas, 1985). Second, the operating efficiency ultimately achieved with a new technology depends heavily on users' modifications (Dutton and Thomas, 1984). Third, modifications affect the technology in use and its physical and organisational context (Leonard Barton, 1988). Davis

(1989) argues that perceived usefulness is a strong correlate of user acceptance. Thus an adaptation and acceptance phase provides an interesting opportunity to investigate not only how a CRM system has been adapted by its stakeholders, but also how the system is being evolved over time as the users find new ways and uses of working with the system after the closure of the 'window of opportunity' (Orlikowski and Tyre, 1994; Orlikowski and Iacono, 2001). A cross communication concerning new uses and ways of working may improve the evolving dynamics of the system. This research attempts to investigate the 'complexity' from an implementation perspective i.e. the degree to which a CRM system implementation is perceived as difficult to understand. Different sub-cultures may not be able to communicate with each other if the implementation is not communicated and understood. Examining this communication from a knowledge management perspective can potentially help to assess the knowledge sharing barriers that inhibit the sharing of knowledge across the sub-cultures and thus delay a successful implementation of a technical innovation.

Davidson (2002) argues how frames (frames are cognitive structures or mental models that are held by individuals) and shifts in frame salience influence sense-making during requirement determination. Their study helps to understand how interpretive power is exercised in an IS project. Moving on from frames to shared frames, Orlikowski and Gash (1994), state that concept of shared frames is closely related to that of sub-cultures. Individuals -drawing on their shared frames- engage in symbolic action and thereby construct a social reality that reflects their common assumptions, beliefs and understandings and that includes particular rules, rituals and customary practice. According to Geertz (1973) and Van Maanen and Barley (1985) sub-cultures rely heavily on cognitive elements such as common frames of reference. Innovation diffusion theory recognises that while the technical attributes of innovation per se may not be significant, perceptions of technology do matter and are important factors influencing technology adoption.

Pre-existing structures and cultures (internal context) may shape differing stakeholder perceptions regarding the new systems and its implementation and performance ('Process' and 'Outcome', Pettigrew, 1997). The perception of different stakeholders and its linkages with knowledge sharing in

the implementation process is an important factor, and needs to be analysed critically. This analysis will be in terms of differential interests, expectations and power (Long and Fahey, 2000). This will give a clearer picture of IT - Human interaction. According to Orlikowski and Gash (1994) to interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it. While these interpretations become taken-for-granted and are rarely brought to the surface and reflected on, they nevertheless remain significant in influencing how actors in organizations think about and act toward technology. Furthermore, Walsham (1992) confirm that contextual conditions of history and different stakeholder perspectives create the conditions for conflict at the level of process in Pettigrew's (1985) five-fold framework.

This research attempts to investigate the 'how' of CRM development, implementation and usage focussing on the 'Process' in Pettigrew's (1985) five-fold framework from a knowledge management perspective. The focus is narrowed down to the implementation process and the factors that enable and inhibit a successful rollout of a CRM system. According to Willcocks and Margetts (1994) the 'Process' in Pettigrew's framework adopted for risk analysis for IS contains the following:

- User commitment
- User training and experience
- Project time
- Project team experience
- Staff stability
- Project management
- Management support

What they do not discuss in particular is the knowledge possessed by individuals involved in the process. Furthermore the backgrounds of such individuals are worth investigating. The individuals for

example in a project team may come from diverse sub-cultures. Understanding the aids/barriers to knowledge sharing across these sub-cultures may improve the communication and enable process stability. These ideas are represented in figure 2.1.

Claver et al. (2001) argue that organisational culture works as glue in the organisation and cannot be ignored while formulating a strategy. They also identify a relationship between information systems and organisational culture. The authors analyse the information system and organisational culture as two closely related issues in any firm. The organisations with a mechanistic culture (Burns and Stalker, 1961) tend to standardise the system implementation compared with the organisations with an organic culture, where the implementation process for an IT system is more culture led. Claver et al. (2001) also underline the cultural consistency which the implementation of an IS requires. They conclude by claiming that IT systems are implemented following technical analysis and considerations, with little if any regard for business needs. However, if the corporate culture of a company is dominated by the business experts with limited knowledge regarding IT the reverse can happen. The business experts may implement a new system without understanding the implications of the implementation process. El Sawy (1985) argues that if IT specialists are members of a corporation or are directly related to it, they are part of an organisational culture and none of them should be excluded from an analysis of organisational behaviour in the face of IT.

Avison and Myers (1995) emphasise the potential role of anthropology as a source discipline for information systems. Although anthropology has been largely neglected in the IS research literature, it is argued that important insights can be gained by adopting an anthropological perspective on information systems phenomena. They illustrate the value of an anthropological perspective by looking at the relationship between information technology and organisational culture. Avison and Myers (1995) stress the fact that the concept of culture has generally been used rather narrowly in the IS literature, and argue that a more critical, anthropological view of the relationship between IT and organisational culture is required. The importance of a relationship between the organisational culture and IT is recognised and the facts regarding culture being a complex issue are argued. However,

Avison and Myers (1995) do not explore the area of how the IT implementation affects the complexity of subculture interactions in an organisation from a knowledge management perspective.

Claver et al. (2001) puts emphasis on organisational culture laying down the guidelines for the acquisition of IT and its later development into an information system. Pliskin et al. (1993) point out that the same information system may have a different meaning for different people, such as system analysts and users who may not have the same points of view concerning the system. The question is, how does IT implementation affect the complexity of a culture in an organisation? Do the sub-cultures at different stages of the implementation process inhibit or enable the process of implementation? Examining the implementation process from a different angle i.e. from an IT perspective the view of Boland et al.'s (1994) is justified due to the specific weight IT/IS is progressively gaining in all business areas. Due to its dynamic speedy impact, IT/IS will create a shared, common vision, which will become a cultural value. There are, however, no clear guidelines other than that the organisational culture needs to be considered before implementing an IT system. Although there is a link made between the IT and organisational culture in the research, the proposition driving the current research is that it would be necessary to explore the impact of IT systems on the organisational culture in particular from a knowledge management perspective.

Mintzberg (1987), and Orlikowski and Hofman (1997), suggest that people talk about strategies in one way, i.e. as a plan with fixed steps to achieve a known goal, while implementing them in another, more ad hoc way, to accommodate unforeseen circumstances. The question raised is "What makes the process of implementation change its course and move away from the original plan." Avgerou (2000) challenges the tendency of the Information System literature to subsume IT innovation in processes of organisational change, either with the role of "enabler" of organisational objectives, or as an instrument appropriated by situated organisational actors. Avegerou (2000) further argues that Information system development is incremental and cumulative, gradually transforming the landscape of the workplace and the nature of the work itself. This means that potentially the IT development and implementation process has cultural effects that can enable or inhibit IT effectiveness.

2.3 Sub-cultures and sub-culture gap

Organisational sub-cultures may be defined as distinct clusters of understandings, behaviours, and cultural forms that identify groups of people on different levels of hierarchies in the organisation. They can be occupational and differ noticeably from the common organisational culture in which they are embedded, either intensifying its understandings and practices or deviating from them (Trice and Morand, in press). Louis (1985) argues that the sub-cultures are the set of understandings or meanings shared by a group of people. The meanings are largely tacit among members, are clearly relevant to a particular group, and are distinctive to the group. Sub-cultures can be loosely coupled with each other, sometimes cooperating and sometimes acting on basis of conflicting interests.

Bloomfield and Vurdubaki (1994) highlight the problematic nature of the boundary between the "technical" and the "social" and its consequences in respect of understanding the relationship between technological and organisational change. The power shown by the technical experts needs to be balanced by bringing in the social part of the organisation. The authors pick a very sensitive area of research to explore; they have highlighted the need for participation. However, they do not explore in depth the perceptions of the actors (social and technical) regarding implementation of an IT system. The boundary itself can act as a gap between the different sub-cultures during the implementation process. The survey done by Price Waterhouse (1991,1992) states that 47 percent of the IT directors in UK see that their main problem is the culture gap existing between IT and business professionals. Furthermore, 56 percent of IT directors believe that the culture gap is losing or seriously delaying IT opportunities for their company to gain competitive advantage.

In addition, several authors have discussed the culture gap between systems analysts and computer specialists charged with information systems (IS) implementation and business users (Fincham, 1994; Grindley, 1992; Hinton, 1994; Kumar and Bjorn-Andersen, 1990). In an overview of the literature Willcocks, Petherbridge et al., (2003) corroborate the persistence of these types of culture gaps into the new century (see also figure 2.1, for an overview). Boland and Tenkasi (1996) argue that, in order

to develop new products, the separate domains must interact and learn from each other in ways that will yield new insights into a problem and new ideas for the successful production of improved products. There have been various attempts made to improve the communication and participation between the sub-cultures to enable a successful implementation of an IT system. Among these are, Systems Development Life Cycles (SDLC) in which well defined phases of development provide bases for management control (Davis and Olson, 1985); Mumford et al. (1978) with their concept of user participation; Social Technical System (STS) by Bostrom and Heinen (1977); Soft System Methodology (SSM) (Checkland, 1981); and Joint Application Design (JAD) by IBM (1977). These studies show that the need for improving the communication between the sub-cultures is vital. These attempts so far, however, have not investigated in depth the subculture interactions at a micro level and the resulting distinctive perspective on knowledge sharing in the implementation process that might result.

The knowledge pervading sub-cultures can be vital for a successful implementation of a CRM (Customer Relationship Management) system. Knowledge sharing is a key factor in the implementation process. To understand the impact of knowledge sharing upon the implementation process of a CRM system, we need to examine the modes of interaction between sub-cultures. Strong hierarchical enterprises prevent smooth cross-functional communication and consequently inhibit cross-functional cooperation or knowledge sharing. Breaking down hierarchies can enable knowledge sharing (Nonaka, 1994). Organisations that maintain hierarchical levels and silos will not encourage it. Knowledge in such organisations frequently becomes 'sticky' that is, residing in one area or silo and not easily moved to the other parts of the organisation (Bartlett and Ghoshal, 1998). The non-codified techniques play an important role in industrial production and in technical and technological innovation (Perrin, 1990).

2.4 Knowledge Management/Knowledge sharing

Having identified the importance of knowledge, its management and sharing, it is useful to look at the literature on types of knowledge. It is also important to identify the elements that facilitate/inhibit the sharing of knowledge across various sub-cultures in an organisation. But first of all let us 'know' what we are talking about. Let us attempt to define what knowledge actually is, and how it is different from data, information, understanding and wisdom. Ackoff (1989) states that the first four categories (Data, Information and Knowledge) relate to the past; they deal with what has been or what is known. Only the fifth category, wisdom, deals with the future because it incorporates vision and design. With wisdom, people can create the future rather than just grasp the present and past. But achieving wisdom is not easy; people must move successively through the other categories.

Data according to Ackoff (1989) is raw. It simply exists and has no significance beyond its existence (in and of itself). It can exist in any form, usable or not. It does not have meaning of itself. In computer parlance, a spreadsheet generally starts out by holding data. Information is data that has been given meaning by way of relational connection. This "meaning" can be useful, but does not have to be. In computer parlance, a relational database makes information from the data stored within it.

Knowledge according to Ackoff (1989) is the appropriate collection of information, such that its intent is to be useful. Knowledge is a deterministic process. When someone "memorizes" information (as less-aspiring test-bound students often do), then they have amassed knowledge. This knowledge has useful meaning to them, but it does not provide for, in and of itself, integration such as would infer further knowledge. For example, elementary school children memorize, or amass knowledge of, the "times table". They can tell you that $2 \times 2 = 4$ because they have amassed that knowledge (it being included in the times table). But when asked what is 1267×300 , they can not respond correctly because that entry is not in their times table. To answer correctly such a question requires a true cognitive and analytical ability that is only encompassed in the next level... understanding. In

computer parlance, most of the applications we use (modelling, simulation, etc.) exercise some type of stored knowledge.

Understanding is an interpolative and probabilistic process. It is cognitive and analytical. It is the process by which I can take knowledge and synthesize new knowledge from the previously held knowledge. The difference between understanding and knowledge is the difference between "learning" and "memorizing". People who have understanding can undertake useful actions because they can synthesize new knowledge, or in some cases, at least new information, from what is previously known (and understood). That is, understanding can build upon currently held information, knowledge and understanding itself. In computer parlance, integration systems possess understanding in the sense that they are able to synthesize new knowledge from previously stored information and knowledge.

Wisdom according to Ackoff (1989) is an extrapolative and non-deterministic, non-probabilistic process. It calls upon all the previous levels of consciousness, and specifically upon special types of human programming (moral, ethical codes, etc.). It beckons us towards gaining understanding about that of which there has previously been no understanding, and in doing so, goes far beyond understanding itself. It is the essence of philosophical probing. Unlike the previous four levels, it asks questions to which there is no (easily-achievable) answer, and in some cases, to which there can be no humanly-known answers. Wisdom is therefore, the process by which we also discern, or judge, between right and wrong, good and bad. Computers do not have, and may never have the ability to possess wisdom. Wisdom is a uniquely human state. Wisdom is the result of learning and using knowledge for a strategic advantage (also known as tricks of the trade, special know how and personal knowledge in this research). After gaining knowledge, wisdom is used to meet new situations. Wisdom is tacit and resides in the minds of the users ('embrained' as put by Thompson and Walsham, 2004). As Churchman (1982) put it in 'Thought and Wisdom', "Wisdom is thought combined with a concern for ethics."

"Wisdom is not a product of schooling but of the lifelong attempt to acquire it."

Albert Einstein

In this research we use the terms such as non-codified, special know how, personal knowledge, tricks of the trade and tacit knowledge for wisdom.

2.4.1 Technological knowledge

Technology knowledge is specific knowledge needed to produce a product for a market (Vincenti, 1993). Vincenti (1993) further divides technological knowledge into three categories; descriptive, prescriptive, and tacit/non-codified. Both descriptive and prescriptive knowledge are explicit/codified knowledge. Descriptive knowledge describes things as they are in reality, whereas prescriptive knowledge prescribes what is to be done in order to reach a desired result. Tacit/non-codified knowledge is implicit in human activity.

2.4.2 Descriptive knowledge

Descriptive knowledge implies factual statements about such matters as material properties, technical information, and tool characteristics. Descriptive knowledge is in close proximity to explicit/codified knowledge since it describes things as they are; it can be in the form of rules, abstract concepts and general principles, and it often has a consistent and generalisable structure (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995).

2.4.3 Prescriptive Knowledge

Prescriptive knowledge is based on efforts to gain a greater effectiveness, such as improved operations (Vincenti, 1993). The basis of prescriptive knowledge is often the experience obtained through trial and error. Because the basis of prescriptive knowledge consists of less scientific principles, and because it is an outgrowth of specific application, it is not easily codified in a general form. "The easier knowledge is codified, the easier it can be transmitted," argues Perrin (1990).

2.4.4 Tacit/non-codified Knowledge

Tacit/non-codified or what Polanyi calls personal, knowledge is implicit and is largely the outcome of exercising individual judgment, skill and practice (Polanyi, 1966). A large part of tacit/non-codified knowledge cannot be transmitted through written or oral form. It is personal knowledge, it is subjective knowledge, and it is immediate and specific knowledge. Tacit/non-codified knowledge often constitutes the “tricks of the trade” experienced workers learn, and it is often protected or restricted knowledge (Vincenti, 1984; Orlikowski and Tyre, 1994). Specialists simply do not, and often cannot, reveal all they know. Tacit/non-codified knowledge and prescriptive knowledge are closely related in practice since both deal with procedures.

Scarbrough and Corbett (1992) note that many of the crucial, incremental improvements in process technology, for instance, occur on the shop-floor. Specialists, however, simply do not reveal all that they know. Tacit/non-codified knowledge is primarily transmitted and learned by working side by side with the experienced technician or craftsman (Herschbach, 1995). Tacit/non-codified knowledge consists of the hands-on skills, best practices, special know-how, heuristic intuitions, and so on. Tacit/non-codified knowledge is personal knowledge that is hard to formalize or articulate (Polanyi, 1973).

Tacit/non-codified knowledge cannot easily be expressed formally. Descriptions, diagrams, and metaphors help to explain tacit knowledge. Tacit knowledge results largely from an individual's experiences. Tacit knowledge is embedded in technological activity to a greater extent than is normally recognised (Herschbach, 1995). In addition, tacit/non-codified knowledge has not disappeared with the use of more sophisticated ways of manufacturing based on the application of science and descriptive knowledge. “On the contrary, new forms of know-how have appeared and all these non-codified techniques play an important role both in industrial production and in technical and technological innovation” (Perrin, 1990). Polanyi (1966) has demonstrated that all human action involves some form of tacit/non-codified knowledge (Nonaka et al., 1995).

The distinction between tacit/non-codified knowledge and explicit/codified knowledge is not, however, clear but problematic. Polanyi (1969) has pointed out that, “These two are not sharply divided. While tacit/non-codified knowledge can be possessed by itself, explicit/codified knowledge must rely on being tacit/non-codifiedly understood and applied. Hence all knowledge is either tacit/non-codified or rooted in tacit/non-codified knowledge.” The knowledge management literature often postulates that tacit/non-codified knowledge is the opposite of explicit/codified knowledge (Choi & Lee, 1997). Nonaka and Takeuchi (1995) define explicit/codified knowledge or codified knowledge as knowledge that can be articulated and in formal language including grammatical statements, mathematical expressions, specifications, and manuals. Such explicit/codified knowledge, they conclude, can be transmitted easily and formally between individuals. Choo (1998) suggests that explicit/codified knowledge is knowledge that is made manifest through language, symbols, objects, and artefacts. According to Choo, Tacit knowledge can also be shared through analogies, metaphors, models, and stories (Choo, 1998). However, in line with Polanyi’s (1966) work, we assume that all kind of knowledge includes a tacit/non-codified dimension. Between the two poles, knowledge is partly explicit, or articulated, and partly tacit/non-codified. Hence, applying explicit/codified knowledge requires mastery of the associated tacit/non-codified knowledge.

2.4.5 Knowledge sharing aids/barriers

The research on social information processing (Salancik and Pfeffer, 1978), power (Pettigrew, 1973; Pfeffer, 1980), specialisation (Burns and Stalker, 1961; Daft and Lengel 1986; Lawrence and Lorsch, 1967), and organisational cultures (Gregory, 1983; Riley, 1983; Pettigrew, 1979, Schein, 1985; Strauss, 1978) further suggests that people tend to share assumptions, knowledge, and expectations with others with whom they have close working relationships. Similarly, social interaction and negotiation over time create opportunities for the development and exchange of similar points of view (Brown and Digid, 1998; Gray et al., 1985; Isabella, 1990).

According to Nonaka, (1994) knowledge intensive firms, competitive advantage and product success are a result of collaborative, ongoing learning. Success depends not only on how effective the diverse individuals are able to organise and develop their unique knowledge competencies but also how they can integrate and utilize their distinctive knowledge both effectively and synergistically (Nonaka, 1994). The synergy can be obtained if the aids/barriers to the knowledge sharing across the sub-cultures are understood. According to Boland and Tenkasi (1996) it requires a process of 'mutual perspective taking' where distinctive individual knowledge is exchanged, evaluated and integrated with that of the others in the organisation. In essence, developing a comprehensive knowledge base amongst a community of highly differentiated yet reciprocally dependent individual specialists requires an ongoing process of 'mutual perspective taking' where individual knowledge and theories of meaning are surfaced, reflected on, exchanged, evaluated and integrated with others in the organization. Much of social behaviour is predicated on assumptions an actor makes about the knowledge, beliefs and motives of others. This is the beginning of the process of perspective taking, and is fundamental to communication. The mechanisms of a perspective taking process are quite complex. The existing theories do not explore fully the mechanisms at a micro level.

In any communication, the 'knowing of what others know' is a necessary component for co-ordinated action to take place (Bakhtin, 1981; Krauss and Fussell, 1991; Mead, 1934). The mechanisms proposed by Lawrence and Lorsch (1967) to enable the 'knowing of what others know' were predominantly structural in nature (liaisons, project teams, matrices etc). They were rational devices for enriching the interdepartmental communication of the organization through better management of the channels of communication, and that generally glossed over the problem of human meaning and interpretation. According to Lawrence and Lorsch (1967) the particularities of the environment, task and technologies faced by an organisation's sub-cultures are associated with differences in cognitive and emotional orientations among individuals in these sub-cultures.

Meyer and Rowan (1977) argue that sub-cultures at the periphery of an organisation may not share information fully with sub-cultures at its technical core. Barriers to knowledge sharing can make the

implementation process for a CRM (Customer Relationship Management) system time consuming and eventually unsuccessful. The four stages of Nonaka and Takuchi (1995) -socialisation, externalisation, combination and internalisation- would take a long time and at times will never happen. If tacit/non-codified knowledge is viewed, as Polanyi (1958) proposes, as highly individual and achievable only through personal experience, diffusion seems to be impossible. Other researchers propose a more positive attitude to diffusion of tacit/non-codified knowledge. Irrespective of the opinion of means of knowledge diffusion researchers consent in that there are difficulties in sharing tacit/non-codified knowledge (Nonaka and Konno, 1998). Here again a case is made for further investigation regarding the tacit/non-codified knowledge, how it is surfaced and shared across sub-cultures and with what effect. The sub-cultures interacting face to face will tend to generate a conflict of ideas. According to Leonard-Barton (1995) this creative abrasion can positively influence the performance. Interaction between the sub-cultures must happen over a prolonged period (Newell et al., 2002). This interaction over a prolonged period may help to develop the cross cultural knowledge, which Iansiti (1993) calls the T-shaped skills. This is to say that individuals possess a depth in their own skills combined with a breadth of understanding of other sub-cultures. Wathne et al. (1996) argues that factors such as accuracy, timeliness, adequacy and credibility of interactions influence perceptions of honesty and openness, and are essential to achieving more frequent and relevant knowledge sharing between the partners.

Krogh, G. V. et al. (2000) describe how effective knowledge creation depends on the physical, virtual and emotional context of an organisation. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. It can be that the inability of an individual to deal with a new situation, new event, new context or new information is an obstacle to knowledge creation. The authors conclude that an organisation must actively pursue the work context as a learning organisation where the individuals of that organisation are attuned to learning new things. Learning implies encountering and assimilating new facts.

Differing cultures within an organisation also affect the efficient sharing of knowledge. These cultures can arise from different educational backgrounds, differential interests, perceptions, expectations and power (Long and Fahey, 2000). The investigation of differential interests, expectations, perceptions and power in a CRM setting from a knowledge sharing perspective thus becomes vital. Newell et al. (2002) further argue that attempts to manage knowledge work, especially where the objective is knowledge sharing, need to focus not just on transferring knowledge about facts and things but also creating a 'shared context for knowing'. A mutual understanding in form of shared mental space, shared experiences, emotions and ideas will be the ultimate outcome of such a prolonged interaction between the sub-cultures. However prolonged interaction in a formal setting may not result in a free sharing of knowledge across the sub-cultures (Kunda, 1991b). Also unless they are questioned critically and their individual theories of meaning are exposed, people from different backgrounds subject to normal discourse agree unproblematically at the level of words and truly believe that they are indicating the same referent domain of meaning giving rise to an illusion of consensus (Gee, 1992).

People can participate in an illusion of consensus over mutual contradictory theories of meaning unless they are engaged in an experience that requires them to reveal their unique theories of meaning. This false consensus effect, in which people assume that others are more similar to themselves than is actually the case, is a form of bias (Ross et al., 1977). This can happen especially in situations where job security is low, knowledge as a power becomes vital for the individuals and knowledge might be seen as a kind of insurance against losing the job (Davenport et al., 1998). People, who are able to control relevant resources, and thereby increase others' dependence on them, are able to achieve the outcomes they desire (Salancik & Pfeffer, 1977). This requires that an actor seeking power must decrease his or her dependence on others. Pfeffer and Sutton (1999) discuss fear as an emotion that prevents organisations acting on knowledge. This fear can inhibit the sharing of tacit/non-codified knowledge, which exists in the form of the 'tricks of the trade', shortcuts, heuristic intuition and special know how across the sub-cultures of the implementation process of a CRM system.

2.5 Knowledge sharing and psychological contracts

Some scholars (Anderson and Schalk, 1998; Makin et al., 1996; Rousseau, 1995; Shore and Barksdale, 1998; Thibaut & Kelley, 1959) argue that psychological contracts play an important role in the outcome of interaction between individuals. According to Rousseau (1995), a psychological contract is an unwritten set of expectations between everyone in an organisation and, unlike the written contract, is constantly changing. Shore and Barksdale (1998) consider psychological contracts to be balanced if the perceived obligations of the employee and the employer are at the same level. They define the level of obligation as the extent to which the employee and employer feel obligated to fulfil a particular term of contract. The extent to which an employee and employer feel obligated to one another takes place as follows: mutual high-obligations, mutual low-obligations, employee over-obligation, and employee under-obligation (Shore and Barksdale, 1998).

In the case of ‘mutual high-obligations’, the psychological contract is balanced as both parties have high obligations to each other. According to Shore and Barksdale (1998), this type of psychological contract obtains the best results in terms of the employees’ affective involvement. It also obtains the best results in terms of their intention to stay or leave their perception of their future within the organization and the perceived support that they receive from the organization. In contrast, a psychological contract of mutual low obligations is again characterized by balance but with both parties having low obligations. As a result of the low perceived employee obligations, Shore and Barksdale (1998) argue that this type of psychological contract secures poorer results for the organisation than the previous type. On the other hand employee over-obligation and employee under-obligation are not balanced. In the case of the last type of psychological contract, the lack of balance and low employee obligations is expected to attain the poorest results.

Whilst studying a variety of psychological contracts, Janssens et al. (2003) used a feature-oriented approach across a large, representative sample that covered different hierarchical layers and relevant professional categories. Six different clusters were found: loyal, instrumental, weak, unattached,

investing and strong. These were discovered to have different patterns of employer and employee obligations, a different profile and different levels of affective commitment and employability. According to Janssens et al. (2003), when investigating the employer obligation of long-term involvement and the employee obligations of personal investment, it was found that flexibility and loyalty are related to high affective commitment. Affective commitment was mainly found in the clusters of strong, investing and loyal psychological contracts. This study, however, does not explore a relationship between the types of psychological contracts and the knowledge sharing.

There are individual and group dimensions to the psychological contract. Rousseau (1995) identifies four types of contract an individual may engage in: two are focused on the individual (psychological and implied) and two are group-related (normative and social). Group-related contracts may be seen as manifestations of the organisational culture (normative contract) and the wider environmental culture (social contract) or context in which the employee was brought up and currently lives. An Individual contract is based on beliefs relating to promises made and accepted, and relies on third party interpretation, for example perception of a potential employee. A Shared contract is dependent on a group's shared culture that has evolved from common beliefs (Rousseau, 1995). To date few links have been established between non-codified knowledge sharing and psychological contracts. Investigation of tacit knowledge sharing across the subculture and their linkages with psychological contracts thus becomes important.

Different scholars talk about 'knowing of what others know' (Lawrence and Lorsch, 1967), 'mutual perspective taking' (Boland and Tenkasi, 1996), 'shared mental space' (Newell et al. (2002), and 'T-shaped skills' (Iansiti, 1993) as aids to tacit/non-codified knowledge sharing. However they do not address the micro processes that lead to the above. This research aims to fill this knowledge gap by investigating the micro elements for example different types of psychological contracts and their linkage with knowledge sharing across the key sub-cultures with resulting affects on the adaptation of CRM systems and their acceptance.

Fear as an emotion is closely linked with the kind of psychological contract that exists between the two sub-cultures. Rousseau (1995) asserts that mutuality is the key for a psychological contract to provide acceptable outcomes - she argues that it is only when both parties have something to gain that they will work to ensure a successful result. However at least part of such a psychological contract will be implicit (Makin et al., 1996), resulting in a lack of clarity for both parties (Anderson and Schalk, 1998). Although each party has a clear and conscious view about the key elements of the exchange they expect (such as reward for achieving goals or the sense of obligation to work late to meet a deadline), other elements will be subconscious and therefore much harder to define (Makin et al., 1996). There are other elements that can be present in a psychological contract, such as selfish motives. In social psychology this phenomenon has been studied in the prisoner's dilemma game, in which the highest outcomes for both participants can be achieved if both cooperate, but a high proportion of participants tend to make selfish choices that lead to lower outcomes for both (Thibaut & Kelley, 1959).

There are further considerations to explore. Attitudes of conflict avoidance and some conservative habits may also prevent the transfer of knowledge, if this knowledge contains some new thoughts or innovative ideas. If most leading members of an organisation are not comfortable with change and not willing to take risks, new ideas may be covered very easily, different views and perspectives would be hidden, and therefore knowledge not culturally legitimated may be suppressed ('don't rock the boat' attitude) (Fahey and Prusak, 1998). This can happen during the implementation process of a CRM system and can inhibit the development of an individual opinion or ideas. Fahey and Prusak (1998) call it one of the eleven deadliest sins of Knowledge Management not to establish, challenge and align a shared context for the members of an organisation. This shared context requires engagement in open, honest, supportive, and critical dialogue to develop different and new views. A process of surfacing and examining interpretations can allow the shaking of the background of consensus and open the possibility of mutual interpretation. This can enable the achievement of a new definition of the situation in which all participants can share (Habermas, 1979). An informal setting according to Van Maanen (1986) can help to voice the differences and face the conflicts in a constructive manner.

There is a need for employees to have some self-motivated creativity and some sense of "care-why" (Quinn et al., 1996) in order to foster knowledge sharing. Part of the problem is that typically the benefits of the contribution to a knowledge database are received by a different stakeholder at a later point in time, and not usually by the provider but by his or her colleagues.

Perception and language are considered one of the main difficulties in sharing tacit/non-codified knowledge. Perceptually the characteristic of unconsciousness entails a problem of people not being aware of the full range of their knowledge (Polanyi, 1958). Explicit/codified knowledge is easy to recognize in oneself but the feeling of a missing link or the elements of intuition are harder to pinpoint. This kind of knowledge is so internalised that it has often become a natural part of our behaviour or way of thinking. Just as we do not have to be conscious of our heart beating we do not exert ourselves in reflecting on our tacit/non-codified knowledge.

According to Nelson and Coopride, (1996), difficulties with language lie in the fact that tacit/non-codified knowledge is held in a non-verbal form. To articulate something that seems natural and obvious is hard for most people. More experience and deeper knowledge leads to higher tacit/non-codified knowledge and that leads to greater difficulties in articulating the knowledge. In some companies a certain lack of a legitimate language is perceptible, which is known and acceptable for all involved people and can carry personal knowledge. This covers the need for a common language to communicate knowledge and special language features like analogies and metaphors to externalise tacit/non-codified knowledge hidden in individual mental models, viewpoints, working models, schemata, paradigms and beliefs (Nelson and Coopride, 1996).

Distance can also raise difficulties in today's work-life. The need for face-to-face interaction is often perceived as a prerequisite for diffusion of tacit/non-codified knowledge. Polanyi (1958) shows other possibilities in an example of learning tacit/non-codified knowledge of chess by studying earlier chess-masters games. In this case the tacit/non-codified knowledge is communicated with the help of an intermediary in material form. But still the most common way of sharing tacit/non-codified

knowledge takes place in face-to-face interaction. In these days when organisations tend to disperse into more distant, virtual or global forms, face-to-face interaction becomes more the exception than the rule (Bennett and Gabriel, 1999). The situation can become worse if the staff turnover is high. The rapid changing of stakeholders especially during the implementation process of a CRM system can cause difficulties in the sharing of tacit/non-codified knowledge. Again refer to figure 2.1 for an overview.

2.6 CRM (Customer Relationship Management)

Finally we intend to research a specific type of systems implementation, namely Customer Relationship Management, also known as 'CRM'. Though often presented as a recent phenomenon, in fact CRM systems have evolved gradually over the last decade, though they have only recently received market and research attention as information systems applications. In earlier times merchants knew their customers including the members of their households. They knew their daily, even monthly and yearly needs and planned the stock accordingly to meet the demands or more correctly 'needs' of their customers. The knowledge of knowing customers and a close interaction with them gave the result of a good relationship and a good relationship resulted in a better understanding of the customers' needs.

Presently many companies are trying to go back to the basics, of those earlier times, in theory at least. However in reality when people in the industry talk about CRM, they really mean keeping an eye on their customers, extracting their time, information and last but not the least the money from their wallets. This could hardly be called relationship building. According to Bose (2002), CRM requires a certain "leap of faith" by a firm. A survey done by 'The Data Warehousing Institute' (TDWI Industry Study, 2000) of more than 1,500 companies found that 41 percent of the organisations with CRM projects were either experiencing difficulties or close to failure. The survey further revealed that 91 percent either have or plan to deploy a CRM solution in the near future. The survey also reveals that only 22% of companies have appointed a chief customer officer to facilitate change. Failure rates of

CRM projects may be as high as 70 % (Tafti, 2002) therefore implementing CRM is hard. Ciborra bluntly states, "CRM seems to have no built in mechanisms by which it acquires its own momentum and the diffusion becomes a self-feeding process" (Ciborra, 2000). The studies so far have looked into the macro level interaction in the paradox of CRM. This research will investigate the micro level (psychological contracts and their linkages with knowledge sharing) interactions and their impact on knowledge sharing in CRM projects.

CRM software attempts to integrate business processes of managing customers onto a single enterprise-wide information system. The major benefits of CRM are improved customer satisfactions and increased efficiencies in customer support. Organizations face many challenges in ERP (Enterprise Resource Planning) integration - the challenges of integration of various functional CRM modules from the same vendors, the challenge of integration with other e-business software applications, and the challenge of integration with legacy systems. The primary measure of success for ERP implementation is ERP integration.

2.6.1 Integration of E-Business Applications

E-business is the combination of strategies, technologies and processes to coordinate electronically both internal and external business processes, and manage enterprise-wide resources. E-business software systems generally fall into four categories: Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Supply Chain Management (SCM) and Sales Force Automation (SFA). To get the most out of CRM systems, CRM should be tightly integrated with other e-business software - Supply Chain Management, ERP, Sales Force Automation, Business to Business (B2B) exchange and ecommerce storefront on the Internet.

2.6.2 Integration of CRM Modules

Packaged CRM software consists of many functional modules - pre-sales module, post-sales module, contact module and service module. Organizations tend to install modules from the same CRM

vendors in the initial CRM implementation. Not all companies will purchase all CRM modules from a CRM vendor (Siebel, Lagan, SAP, Oracle, PeopleSoft etc.). The implementation of a CRM project takes a few months to years. In the later phase of CRM implementation, organizations may have to choose modules from different vendors, or a new version of the module from the same vendor.

2.6.3 Integration with Legacy Systems

Legacy systems, at many organizations, have accumulated huge amount of data vital to the survival, operations, and expansion of their businesses. Integration of CRM system with legacy system is more complex than integration of CRM modules and Integration of E-Business Applications. It routinely requires the installation of third-party interface software for the communication between CRM software systems and legacy systems. Second generation CRM systems use Relational Database Management Systems (RDBMS) to store customer data. Conversion from data in legacy systems to RDBMS is a time-consuming process. Different EAI (Enterprise Application Integration) tools are used to overcome this hurdle. While most interface software provide API (Application Programming Interface) for CRM to access legacy systems, some vendors offer an integration module that automates or accelerates the transformation of legacy application logic and data into reusable components with XML, SOAP, J2EE and .NET interfaces.

A more recent study done by Goodhue et al. (2002) has found three important CRM targets:

- Applications – Individual applications that deliver business value
- Infrastructure – A data, software, and hardware infrastructure that supports CRM applications and will also support future applications
- Transformation – An organisation transformation made possible through comprehensive CRM efforts

Conclusively, CRM is relatively understudied. The literature available on CRM studies is limited and thus presents a case for this research. This research attempts to investigate the implementation process of CRM with a special focus on the ‘transformation’ part. By using the existing theories of IT

implementation it attempts to investigate the adaptation and acceptance of the system by its stakeholders. That is, how the stakeholders of the system and the system itself are evolving through finding new uses, workarounds, upgrades, patches, cookies, viruses, and failures in so called societal and organisational transformation processes (Orlikowski and Iacono, 2001). The research will investigate the stakeholder involvement from a B2C perspective. Both the companies chosen for gathering empirical data have a differential customer base. As a result, interaction between the internal customers and external customers will also be different. Investigating the modes of these interactions will give an insight to how tacit/non-codified knowledge is surfaced and shared and with what effect on the implementation of a CRM system.

Both internal and external customers need to be kept in the focus of this study. Most post-mortems of CRM failures trace the problems back to the alignment of incentives and metrics, and the absence of a customer-facing organisation. Another pitfall is to concentrate on the customer contact processes without making corresponding changes in internal structures and systems (Digby et al., 2002). This study aims to focus on the process of ‘adaptation and acceptance’ of the system, covering both the internal and external customers as part of the stakeholder analysis. The research in particular, will study the knowledge sharing loop between the front and back-office to identify and investigate the knowledge silos. Sponsorship of CRM according to Goodhue et al. (2002) is initiated by senior management. This research will investigate the involvement of senior management and the grassroots including the external customer from a knowledge sharing perspective.

2.7 Conclusion: Preliminary Analytical Framework for investigating Knowledge Gaps

The literature review has focussed on aspects of Culture and Knowledge Management to analyse critically the implementation process of an IT system within an organisation. Themes of stakeholder perception, knowledge sharing, psychological contracts and the subculture interaction have emerged and have aided in understanding the importance of stakeholder perceptions.

There is a consensus over the importance of understanding the implementation process. Over the years, several attempts to explore different elements of the implementation process have been made. However, the links between stakeholders' perceptions (based on the differential interests, expectations and power) and knowledge sharing in the implementation process of a CRM system have not yet been explored. This research attempts to investigate the 'how' of knowledge sharing in the CRM implementation. The focus is narrowed down to the non-codified knowledge sharing enablers and inhibitors in connection with a roll out of a new CRM system.

The studies investigating the implementation process of an IT system are outdated or give only a one sided view at a macro level. This research treats technologies and organisations as mutually dependent and dynamically emergent. There is still much opportunity for the IS (Information Systems) field to move beyond relatively simple black-boxed view of technology towards more powerful conceptualisation of the role of IT artefacts in organisations (Markus and Robey, 1988). Furthermore, Orlikowski and Iacono (2001) after reviewing numerous (N = 188) articles, argue the need to put technology back into the study of information systems. The literature gap regarding the linkage between the existing implementation theories and Customer Relationship Management (CRM) systems from a knowledge management perspective is identified. This research aims to fill the gap by testing the existing knowledge regarding IT implementation in a CRM environment.

Different scholars argue to make a case of the importance of culture during the implementation of an IT system. However, not much is said about the culture behind the clicks (IT culture). There is a

consensus over the culture gap that exists between the IT experts and the users/business experts and is delaying the implementation. Yet there is very little mentioned regarding the knowledge sharing across different sub-cultures and its impact on the adaptation and acceptance of a CRM system. Why the knowledge silos/stickiness exists needs to be investigated further. Some Scholars seem to agree over the difficulties of tacit/non-codified knowledge sharing. Despite this, there is a lack of consensus over the methods needed to overcome the inhibitors of tacit/non-codified knowledge sharing.

There is some consensus that informal settings can aid/facilitate the transfer of knowledge across sub-cultures, but much still needs to be investigated over how to attain the Boland and Tenkasi's (1996) 'mutual perspective taking'. As recorded above, some scholars argue that psychological contracts play an important role in the outcome of an interaction between individuals, though no link has been established between knowledge sharing and psychological contracts. Similarly, scholars argue that people can participate in an illusion of consensus where they assume that others are more similar to themselves than usually is the case. Forces of power and fear with their linkages with knowledge sharing were discussed. Existing research revealed that factors aiding/inhibiting knowledge sharing vary depending on the situations and surroundings.

Conclusively as discussed above, scholars talk about 'knowing of what others know', 'mutual perspective taking', 'shared mental space' and 'T-shaped skills', as aids to tacit/non-codified knowledge sharing. However they do not address the micro processes for example different types of psychological contracts and their linkage with knowledge sharing that lead to a 'mutual perspective taking' and the rest. This research aims to fill this knowledge gap by investigating the micro elements (psychological contracts) that lead to a shared mental space to enable tacit/non-codified knowledge sharing to an explicit form across the key sub-cultures and its affect on the adaptation and acceptance of a CRM system. The linkage of non-codified knowledge sharing and its effect on the 'adaptation and acceptance' of a CRM system remains yet to be explored. The analyses of issues regarding knowledge sharing across the sub-cultures of the implementation process of an IT system have elucidated the

discussion of knowledge sharing aids/barriers across them. The review has generated the following research questions.

Research question (The research question will get refined through a pilot study result):

How is tacit/non-codified knowledge surfaced and shared across key sub-cultures and with what effect on the adaptation and acceptance of a CRM system?’

To achieve the above, stakeholders of the system would need to be identified. Key sub-cultures of stakeholders would need to be identified. Modes of Stakeholder interaction from different sub-cultures need to be investigated closely. This will be carried out in terms of whether the interaction had a broad or a narrow base. Senior management and grass root involvement will be investigated. This will include the external customers. The benefits of such an involvement will also be discussed. Stakeholders’ perceptions, interests and expectations would need to be identified. Differing stakeholders’ perceptions regarding the effectiveness of CRM system from both the sites will be compared and their causes discussed.

Investigation of the modes of interactions, for example:

- Is the interaction loose/tight, formal/informal, face to face /distant and prolonged/short?
- What types of psychological contracts exist?
- How do the psychological contracts affect tacit/non-codified knowledge sharing?
- Has ‘mutual perspective taking’ taken place?
- What are the elements that lead to or act as a barrier to a ‘mutual perspective taking’?
- Can we see the signs of creative abrasion? In other words, are people being open about their perceptions, interests and expectations?
- The aids/barriers to knowledge sharing will need to be identified and analysed using the theories from the literature review.
- How do language, distance and loss of power barriers appear at both the organisations?
- What are the similarities and differences of aids and barriers across the two organisations and why?

The above points will give an excellent opportunity for a comparison. The sub questions are reflected in a preliminary analytic framework in figure 2.2. It identifies the modes of interactions, main types of influences and outcomes to be examined and posits ways in which they interact to influence the adaptation and acceptance of a CRM system. This framework amalgamated with Pettigrew's (1985, 1990) five fold framework will guide the data collection and analysis in a pilot study. We plan to use Pettigrew's framework because of its appropriateness in analysing the processual phenomenon. The results of the analysis will then be used to revise and expand the framework as necessary better to reflect the results. The revised framework, and the resulting research questions about influences on adaptation and acceptance and modes of interaction, can then form the basis for the empirical work.

2.8 Intended Research Contribution

The research will potentially benefit organisations where CRM (Customer Relationship Management) systems are implemented on a large scale, thus making it of crucial importance in investigating the details of micro mechanisms involved in the implementation process. The topic aims to provide information that will facilitate deeper practitioner and researcher understanding of CRM systems implementation processes at a micro level. The contribution of the PhD will be to further integrate diverse areas relevant to understanding the implementation process with a particular focus on CRM.

Different scholars talk about 'mutual perspective taking', 'knowing of what others know', 'shared mental space' and 'T-shaped skills', as aids to tacit/non-codified knowledge sharing across the sub-cultures. However, they do not address the micro processes in our case the psychological contracts that lead to a 'mutual perspective taking' and the rest. This research aims to fill this knowledge gap by investigating the micro elements; for example, different types of psychological contracts and their linkage with knowledge sharing that lead to a shared mental space to enable tacit/non-codified knowledge sharing across the key sub-cultures and its affect on the adaptation and acceptance of a CRM system.

In the following methodology chapter we discuss the methodological approach in order to investigate and enhance our understanding of the knowledge sharing phenomena in a CRM setting. The methodology chapter intends to provide an overview of the research design suitable for this research. The research approach and questions are developed in more detail in later chapters. A pilot study is carried out based on the following chapter which not only helps to refine and test the methodology, but also helps in refining the final data gathering framework. Under the methodological approach section the following chapter discusses the paradigmatic assumptions on which this research is based. It then discusses the choice of sectors and sites, and methods of data collection and data analysis. Finally it discusses the limitations of this research and the proposed approach to overcome them.

Adaptation and acceptance of a CRM system

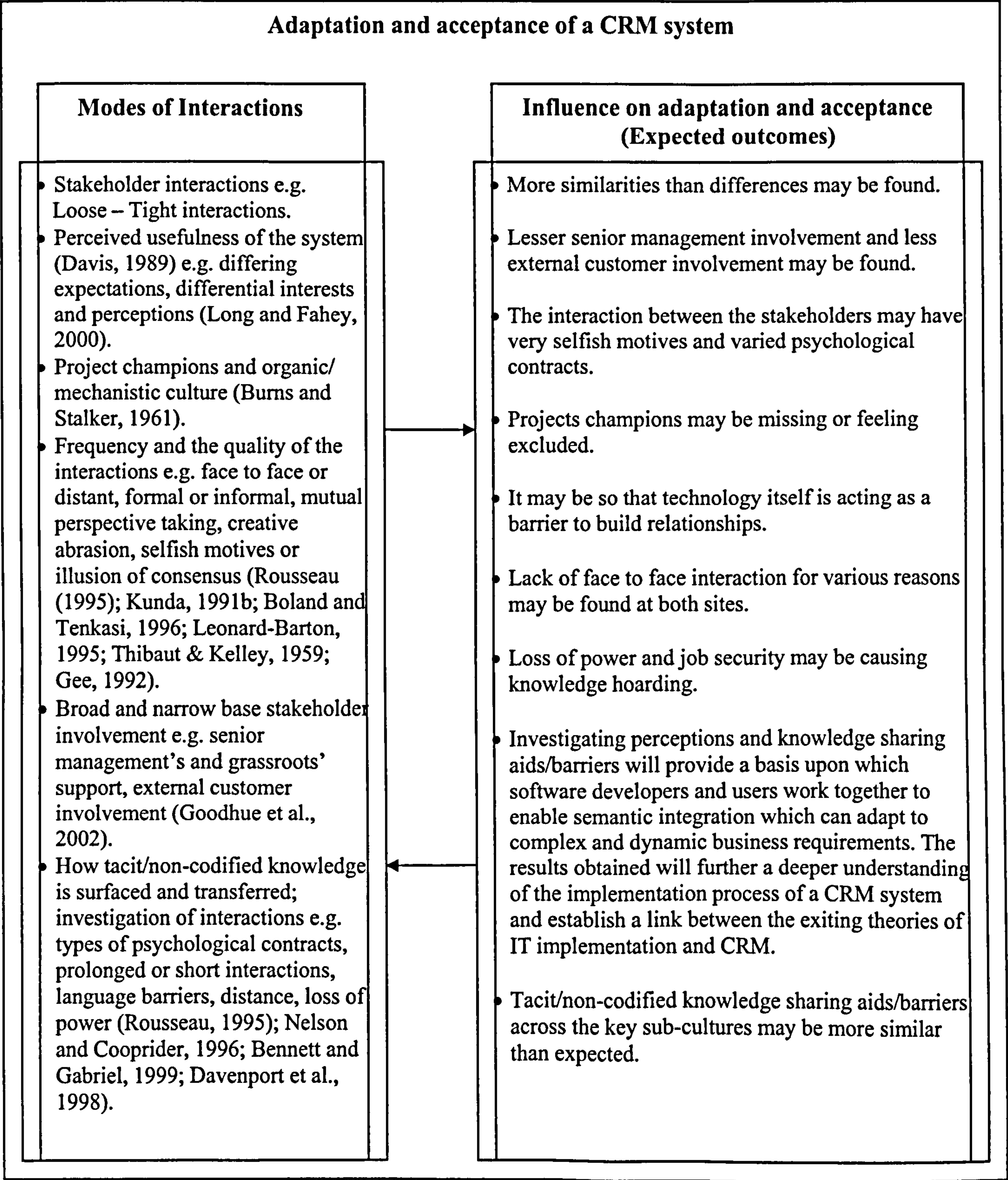


Figure 2.2 Analytic Framework

Chapter Three

Research Methodology

3.1 Introduction

This chapter intends to provide an overview of the methodological approach and the research design suitable for this research project. The research approach and questions are developed in more detail in later chapters. Under the methodological approach section this chapter discusses the paradigmatic assumptions on which this research is based. It then discusses the choice of sectors and sites, and methods of data collection and data analysis. Finally it discusses the limitations of this research and the proposed approach to overcome them. We discuss the evolution of our methodological approach and research questions in more detail in the next chapter, namely Pilot/Initial analysis.

3.2 Methodological Approach

In this section we discuss our methodological approach and the rationale for using this approach, namely the longitudinal comparative case study. We show how our research, following Mingers and Gill's (1997) justifications, explains the need to use a multi-paradigmatic approach in order to understand the IS implementation phenomenon at a micro level.

3.2.1 Positivist vs. Interpretive Research in Information Systems

Generally speaking, any piece of information systems research has a tendency to be categorised in one of two distinct approaches: positivist or interpretive. Some researchers may term this distinction as quantitative or qualitative. Although a quantitative research inclines towards positivism, the philosophical underpinnings for qualitative research are more heterogeneous compared with quantitative research. Guba and Lincoln (1994) suggest that there are four paradigms which a qualitative research can subscribe to: positivism, post-positivism, critical theory and constructivism. Instead of these four paradigms, Orlikowski and Baroudi (1991) suggest that one could categorise qualitative research in terms of positivist, interpretive and critical. We see our research including both the positivist and interpretive dimensions as it tends to dig deeper into the existing subcultures to capture the non-codified knowledge sharing issues.

Each research approach embodies different assumptions and views towards ontology, epistemology, axiology, rhetoric and methodology (Creswell 1998). Ontology refers to the nature of reality, epistemology addresses the nature of knowledge and the process of acquiring knowledge, axiology deals with the question of value in research, rhetoric considers the style of language used in the research and finally methodology refers to the way of conducting empirical research.

3.2.2 Positivist Approach

Before the arrival and rapid growth of interpretive research in the past few years, in information systems research, the positivist approach was a longstanding research tradition employed to understand the nature of technology and its consequent impacts in organisations. Originally positivism was rooted in the field of natural science research. The underlying perspective of this approach, ‘the thesis of the unity of science’, was introduced and advocated in social science research as a means to explain, predict and ultimately control social phenomena. The dominance of this approach for studying a wide range of IS issues was apparent in the 1980s. Looking at a number of articles which reviewed and summarised trends of IS research methods (Galliers and Land 1987; Orlikowski and Baroudi 1991; Hamilton and Ives 1992) most research methods in the 1980s came from the camp of positivism. On the definition of this approach, Creswell (1994) proposes that: “quantitative study is an inquiry into a social or human problem based on testing theory composed of variables, measured with numbers, and analysed with statistical procedures, in order to determine whether the predictive generalisations of the theory hold true.”

At the level of ontology, researchers under the positivist camp hold the belief that there is a single reality and that it is external to individual cognition. Based on this perspective, reality consists of hard components connected by a lawful and rigid order. This view of reality also reflects directly on the nature of knowledge perceived by positivist researchers. From the standing point of epistemology, they maintain that knowledge is objective and that it is the results “emerging from the search regularity and casual relationships and scrutinise them through empirical testing” (Hirschheim 1985).

Thus, the methodological approach to acquiring objective knowledge is to follow ‘the rules of formal logic’ and ‘the rules of hypothetical-deductive logic’ (Lee 1997). In this approach there are no values given in addition to the pre-defined variables and biases are carefully eliminated or controlled by rigorous research steps. As for the rhetorical assumption, researchers who subscribe to a positivist view of research should distance themselves from the phenomenon or subject that is under investigation and should report their findings in a formal and impersonal manner.

Although this approach to information systems research is widely recognised and has been used since the early 1980s, increasingly there have been doubts about its capability and feasibility for allowing an information systems researcher to fully investigate the use of technology in organisations. Galliers and Land (1987) maintain that although the positivist approach “May well be academically acceptable and internally consistent, all too often it leads to inconclusive or inappropriate results.” They reason that information systems are not only about technical systems, but are also concerned with the environment in which technology and human interactions take place. According to Liebenau and Backhouse (1990), an information system is a social system which consists of technical, formal and informal components. Unlike a technical system, the environmental and human factors create levels of uncertainty and complexity for IS researchers when studying the impact of technology implementation in the real world.

Positivist research design, such as laboratory experiment and survey, requires researchers to define a limited set of variables, to manipulate these variables using the scientific rules of logic and to represent the result in the form of statistics. These methods might be appropriate in natural science but are likely to be inappropriate for the investigation of knowledge sharing phenomena with many factors not easily predictable or controllable. Guba and Lincoln (1994) point out that there are problems with quantification in the study of social science: 1. a problem of context stripping, 2. a problem of exclusion of meaning and purpose, 3. a problem of disjunction of grand theories with local context, 4. a problem of inapplicability of general data to individual cases and 5. a problem of exclusion of the discovery dimension in inquiry. As a result of these problems, it is clear that a quantitative research

might be able to demonstrate the relationship between certain technological and organisational variables, but nevertheless it would certainly fail to capture the differing stakeholder perceptions and to embrace the diversity, embedded in the 'Process' (Pettigrew, 1985) of CRM implementation at our research sites; since the positivist research approach tends to oversimplify situations into a few variables and to disregard the value of context (Pettigrew 1990, 1997). This is why researchers using the positivist approach alone might have difficulties in explaining the different social consequences in organisations with the same type of technology (CRM in our case). Thus, in order to embrace the complexity of social interactions of which information technology is a part, an interpretive approach is also needed as a complementary research method for information systems inquiry.

3.2.3 Interpretive Approach

In comparison with a positivist perspective on social science research, interpretive researchers hold the belief that in order fully to understand the meanings of a complex world populated by human beings, we must interpret through the eyes of those who live in it (Schwandt 1994). According to Creswell (1994) the interpretive approach is:

“An inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting.”

Upholders of the interpretive approach to social science research believe in the existence of multiple realities perceived by different social actors in different places and at different historical periods. The underlying epistemological assumption is that the nature of knowledge is subjective, and the construction of knowledge is subject to an individual's interpretation, in a context in which an interaction with others takes place. In addition, those who hold the interpretive view argue that knowledge is not fixed, but constantly revised by an individual whenever there is a change of social, economic, cultural and political factors in a context. In other words, knowledge is not all-scientific fact

but emerges through one's day-to-day life experiences. Since the purpose of an interpretive study is to understand the meaning of the real world through interpretations of individuals, this type of study is value-laden and recognises the existence of bias. According to Guba and Lincoln (1994) the research methodology of these enquiries should have characteristics of being hermeneutical and dialectical.

The field of interpretive research includes a number of research strategies such as ethnography, phenomenology, biography, action research and case studies. In this thesis, we chose the longitudinal comparative case study as our strategy of empirical inquiry and will discuss this in a greater length later in section 3.3.3. Finally, according to Creswell (1998) and Lincoln and Guba (1994) we need to allow the voice of the 'passionate participant' to be heard and an interpretive study should be 'formed with words'.

Drawing a worldview as described above, an IS interpretive researcher sees that an information system is a socio-technical system in which the relationship between artefact and human being is not all straight forward and clear. As discussed earlier, the positivist research approach does not allow a researcher fully to capture the richness of interactions evolved around information technology in organisations. In contrast, interpretive view posits that the social phenomena must be understood through interpretations that are used by social actors to make sense of themselves, others and the world. Therefore, the aim of an interpretive research, as argued by Walsham (1993), is to "produce an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context." As a result, the greatest strength of this approach is to help the researcher to focus on real life issues, to obtain a more holistic view of how members of the organisation give meanings to a particular information system and interact with it in response to these given meanings (Silverman 1998).

The practical value of interpretive studies in information systems was first vividly demonstrated through the work of Markus in 1983. In her classic paper *Power, Politics and MIS Implementation*, she points out the importance of contextual factors on the consequence of technology implementation

in an organisation. Her findings are consistent with the argument that most information systems failures are the consequence of social factors (Lyytinen and Hirschheim 1987). Since then, there have been a number of influential IS interpretive studies, such as Orlikowski and Gash (1994) on technology appropriation, Boland and Day (1989) on system design, Walsham and Waema (1994) on information systems strategies, Lee (1994) on the use of electronic mail, and Gopal and Prasad (2000) on the use of group decision support systems (GDSS), to name but a few. More discussion on the purposes and implications of interpretive case studies will be presented in the section of research design later on.

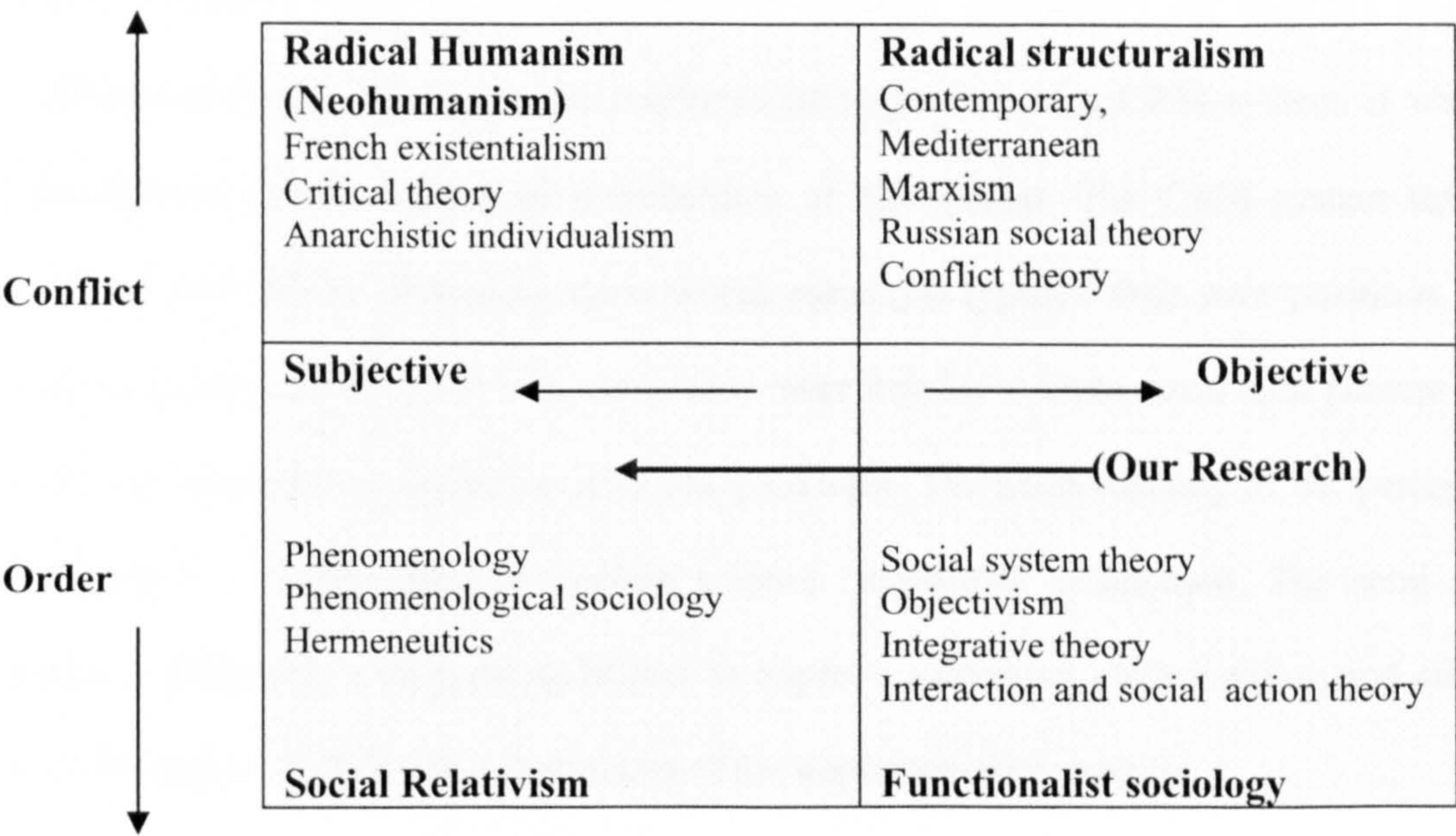
Despite the benefits that enable researchers to grasp the social outcomes of information systems in organisations, several concerns are raised regarding interpretive research in the IS field. Since the essence of this approach centres on interpretation, Nandhakumar and Jones (1997) identify some limitations of interpretation that might endanger the research quality: 1. the ability of the researcher to understand the subjects' interpretation correctly, especially if both are from differing social and cultural backgrounds, 2. the problem of the difference between what is said and what is done, 3. the issue of secrecy in social interaction. Some subjects may not want to raise certain issues or may intend to mislead the researcher's understandings and 4. the subjects themselves might not be able to give an account of their actions since those behaviours form part of their social routine, of which they may not be fully aware. However, Klein and Myers (1999) believe that if a researcher can follow seven principles underpinning interpretive research, a high quality interpretive study can be expected. Up to this point in this chapter, we have stated what we understand by positivist and interpretive research, as well as having discussed the strengths and weakness associated with each approach in information systems research. Next we provide reasons why we consider that a longitudinal comparative approach is more appropriate than a positivist or interpretive one.

There is a synergy between constructivism and interpretivism on the view of knowledge and technology in use. Both paradigms see knowledge construction and technology adaptation as a situational and social process. In order to capture the reality of non-codified knowledge sharing issues

we need a holistic approach which allows us to understand a contemporary situation and study it over a period of time through inductive and deductive research cycles. These inductive and deductive research cycles will help in understanding how the knowledge sharing environment evolves and will enable us to see the closure of the ‘window of opportunity’ as so eloquently put by Orlikowski and Tyre (1994). We will learn in the later chapters how our chosen approach enabled us to reveal some of the critical staff retention issues at Birmingham City Council.

The research question generated as a result of the literature review, enabled construction of the semi structured interview guidelines for collecting data from IBM.COM and Birmingham City Council IT Services (see Appendix 1 for details). The questions and themes arising from the literature review that formed the basis of the objectives of this study contained a number of ‘why?’ and ‘how?’ questions. Therefore qualitative methods were considered appropriate for gathering the data required as suggested by Hyde (2000). This research used ‘four paradigm’ model as an initial frame (Burrell and Morgan, 1979) to gain a fix on the area of research, namely the micro mechanisms in the implementation process of a CRM (Customer Relationship Management) system. The four paradigms helped to probe further why stakeholders had different perceptions regarding the implementation process of a CRM system. A predominantly qualitative approach was used to understand the cause of perceptions of different stakeholders. Our approach used Burrell and Morgan critically and challenged the argument that, for research purposes, locating inside any one paradigm forecloses the possible use of the others – as argued against by Mingers and Gill, (1997) on the incommensurability argument.

The sociology of radical change



The sociology of regulation

Figure 3.1 Scientific rationale

Two types of assumptions about knowledge (epistemological) and the world (ontological) given by Burrell and Morgan yield result in two dimensions. A subjectivist-objectivist dimension and an order-conflict dimension. In the former, the essence of the objectivist position is to apply models and methods derived from the natural sciences to the study of human affairs. The objectivist treats the social world as if it were the natural world. In contrast, the subjectivist position denies the appropriateness of natural science methods for studying the social world and seeks to understand the basis of human life by delving into the depths of subjective experience of individuals. The principal concern is with an understanding of the way in which the individual creates, modifies, and interprets the world in which he or she finds himself or herself. In the order-conflict dimension, the order or integrationist view emphasizes a social world characterized by order, stability, integration, consensus, and functional coordination. The conflict or coercion view stresses change, conflict, disintegration, and coercion. The dimensions when mapped onto one another yield four paradigms (see figure 3.1): functionalism (objective-order); social relativism (subjective-order); radical structuralism (objective-conflict); and neohumanism (subjective-conflict). This particular framework allowed us to capture the distinguishing assumptions of alternative approaches to CRM implementation process in a simplified yet philosophically grounded way.

Even though this research is predominantly in the functionalist sociology paradigm, the fact that it tends to move towards social relativism cannot be ignored. To identify the enablers and inhibitors to non-codified knowledge sharing in the implementation process of a CRM system, it was vital to take into consideration the perception of stakeholders of the system. The CRM system stakeholder can have different perceptions depending upon which paradigm typifies their own positions. This meant that a more qualitative perspective was considered more helpful to understand their perceptions. However, this made our research not limited to only one paradigm. The understanding of the perceptions and different approaches to implementation implies a more 'subjective' orientation. The semi structured in-depth interviews together with probing helped to improve subjective understanding and cultural sensitivity of the perceptions of different stakeholders of the implementation process.

3.3 Research Design

In this section we discuss various research methods and provide a rationale for our choice of method, namely a longitudinal comparative case study approach incorporating Pettigrews (1985, 1990, and 1997) processual analysis framework. After having discussed various methods we provide the rationale for our approach using Pettigrew's (1997) guiding assumptions. We first explain these assumptions and then discuss our chosen approach.

3.3.1 Participatory action research (PR)

Participatory action research according to Kemmis and McTaggart (2000) is an alternative philosophy of social research (and social life, 'vivencia') often associated with transformation in the Third World. Three particular attributes are often used to distinguish PR from conventional research: shared ownership of research projects, community-based analysis of social problems and an orientation towards community action.

Criticism against PR suggests that it lacks scientific rigor, confusing social activism and community development with research. Such practices according to Kemmis and McTaggart (2000) may employ

desirable means and serve desirable ends, but to confuse them with research – or worse still to disguise or dignify them as research – is a fundamental form of deception and manipulation, in this view.

The association of the practice of PR with activists occasionally leads to accusations that it is politically motivated outsiders, not the poor deprived, and exploited themselves, who take the initiative in identifying problems to be investigated. This in turn may lead to the charge that the welfare, livelihoods, and in some cases lives of disadvantaged people are put at risk as a consequence of their involvement in PR.

3.3.2 Case study

According to Benbasat et al. (1987) the goal of a case study is to obtain a rich set of data surrounding the specific research issue, as well as capturing the contextual complexity. Benbasat et al. (1987) defines a case study as examining a phenomenon in its natural setting and employing multiple methods of data collection to gather information from one or a few entities (people, groups or organisations). With a case study, the qualitative researcher looks for patterns in the lives, actions and words of people in the context of the complete case (Neuman 1997). “Case methodology is clearly useful (Avison et al. 2001) when a natural setting or a focus on a contemporary event is needed” (Benbasat et al. 1987) as in the CRM implementation.

Neuman (1997) argues in regard to case study strategy, “Qualitative and case study researches are not identical, but almost all qualitative research seeks to construct representation base on in-depth, detailed knowledge of cases”. The case study method is a legitimate way of adding to the body of knowledge in the IS field because case study strategy is particularly well suited to IS research (Benbasat et al. 1987). Case studies can combine rigour, relevance and pragmatism (Avison et al. 2001) and can take many different forms. Benbasat et al. (1987) outline three reasons why case study research is a viable information systems strategy:

- The researcher can study IS in a natural setting
- The case method allows the researcher to answer “how” and “why” questions, that is, to understand the nature and complexity of the processes taking place.
- It is an appropriate way to research an area in which few previous studies have been carried out.

Multiple data collection methods are typically employed in case research studies as evidence from two or more sources will converge to support the research findings (Benbasat et al. 1987). Yin (1994) identifies several sources of evidence that work well in case research: documentation, archival records, interviews, direct observations (which involve noting details, actions, or subtleties of the field environment) and physical artefacts. All of these sources of evidence will be used in this research.

The case study approach is the most commonly used qualitative method for research in information systems (Orlikowski & Baroudi, 1991). This is because the focus of research is often concerned with the effects and impact of the information system within the organisation rather than the technical aspects of the information system alone (Myers, 1997).

Case studies can be based on multi-perspectival analysis. This approach is adopted here. Here the researcher needs to consider not just the voice and perspective of the actors, but also of the relevant groups of actors and the interaction between them. According to Feagin, et al., (1991) case studies used this way can also give voice to the powerless and voiceless. By contrast all too many sociological studies of the homeless and powerless do so from the viewpoint of the "elite" (Feagin, et al., 1991). In the present research we have been able to employ a multi-perspectival approach in analysing two case studies carried out at IBM.COM and Birmingham City Council IT Services to investigate the phenomena of knowledge sharing in depth (Orlikowski, 1993; Walsham and Waema, 1994; Myers, 1995). This approach meant we could, in the chosen CRM setting, investigate the implementation

micro mechanisms in the detail needed. Adopting two case studies for analysis also allowed drawing theoretical conclusions from cross-case comparison (Yin, 1994; Darke et al., 1998; Pettigrew, 1997).

Given that the time scale for this research was restricted, attention was paid to Bell (1992) who suggests that the case study approach is appropriate for individuals who wish to investigate a particular issue to some depth in short time frames. But Bell (1992) also notes many critics of the case study approach question the academic value of this method as they argue that generalization from such results is not applicable. However Yin (1994) also argues that analytical generalization is suitable and possible from a limited case study research base.

Construct validity is especially problematic in case study research. It has been a source of criticism because of potential investigator subjectivity. There are three proposed remedies to counteract this: using multiple sources of evidence, establishing a chain of evidence, and having a draft case study report reviewed by key informants at IBM.COM and Birmingham City Council IT Services (Yin, 1994; Pettigrew, 1997). The proposed methodology was tested in a pilot study to refine and make it more case specific.

The research will potentially benefit organisations where CRM systems are implemented on a large scale, thus making it of crucial importance to investigate the details of mechanisms involved in the implementation process. It will critically investigate in detail, the different perceptions of stakeholders of a system whilst investigating the knowledge sharing across the key sub-cultures during the implementation process. At the initial stages of this research the term stakeholder and subculture was more general. As the research process progressed specific stakeholders and sub-cultures were identified. We detail them in our next chapter. Benbasat et al. (1987) state that case research is suitable for studies that are in early or formative stages, or where the experiences of the subjects are important and the context within which they operate is vital. The purpose of this research was to discover, identify, describe and analyse the micro elements of the implementation process in a CRM setting from a knowledge sharing perspective.

3.3.3 Processual analysis

After having described and critically analysed various research methods we discuss the approach adopted by this research and its appropriateness in understanding the knowledge issues in a CRM setting. This research uses a longitudinal comparative case study approach to collect and critically analyse empirical data. The nature of this research was essentially of a processual type. The five guiding assumptions for processual research proposed by Pettigrew (1990, 1997) provided an appropriate justification of our approach. They are:

- Embeddedness; studying processes across a number of levels
- Temporal interconnectedness; studying processes in past, present and future
- A role in explanation for context and action
- A search for holistic rather than linear explanations
- A need to link process analysis to the location and explanation of outcomes

We discuss the above in detail below.

3.3.3.1 Embeddedness

According to Pettigrew (1997) social processes are deeply embedded in the contexts that produce and are produced by them. Part of the interactive field is the analysis of how outer and inner contexts surrounding the firm shape this process. Outer contexts include the economic, social, political, competitive and sectoral environments in which the firms are located. In our cases the environment may have been the same and yet how people from public and private sector made sense of it varied.

Inner context refers to the inner mosaic of the firm; the structural, cultural and political environments which in consort with the outer context shape features of the process. Processes according to Pettigrew (1997) are embedded in contexts and can only be studied as such. We have attempted to study the micro elements of a CRM system implementation in this research from a knowledge management

perspective. In order to understand the micro elements such as psychological contracts, it was vital to take into account the inner and outer contexts of the organisations studied. The above principle is also favoured by Walsham (1995) and Klein and Myers (1999). Furthermore, we investigated and took into account the differing perceptions at different levels of hierarchies at both research sites.

3.3.3.2 Temporal interconnectedness

We have provided briefly an organisational history and IS strategy background of the research settings so that the intended audience can see the emergence of the knowledge sharing phenomenon. Pettigrew (1997) argues that understanding the sequence and flow of events over time is a crucial requirement for the process scholar. Our pilot/initial analysis was instrumental in studying longitudinally the micro mechanisms of knowledge sharing processes in CRM implementations at our research sites.

Our research attempts to show how antecedent conditions at our research sites have shaped the present and are influencing the emerging future. Beneath the surface events and chronology we have searched for the recurrent patterns, structures and underlying logics in the processes of CRM implementations. According to Pettigrew (1997) there is no assumption of predetermined time tables, of ordered and inevitable sequences or stages. As we saw in our research process, the trajectories of CRM implementation strategy process were probabilistic and uncertain because of changing context and human action. This coincides with Loasby (1976) who so eloquently put it, “If choice is real, the future cannot be certain; if the future is certain, there can be no choice.”

3.3.3.3 A role in explanation for context and action

According to Pettigrew (1997), context is not just a stimulus environment but a nested arrangement of structures and processes where the subjective interpretations of actors perceiving, learning and remembering help shape the process. The above reinforces the suitability of Pettigrew’s processual approach in our research. Our processual approach has been instrumental in highlighting how differing perceptions of CRM system stakeholders shaped the process of implementation at our research sites.

This research attempts to reinforce what Pettigrew (1997) stated so elegantly - that organisational processes are both constrained by features such as tradition and technological commitments and also shape contexts, by for example preserving or (as in one of our cases) altering technological strategies.

3.3.3.4 A search for holistic rather than linear explanations

Links between multiple levels of contexts can only be established by exposing actions and recurrent patterns in the investigation over a long period of time. Time is captured in our study of the CRM implementations through a combination of retrospective and real-time analysis of the contemporary situations. As stated by Pettigrew (1997) our processual comparative case study approach has a natural advantage over other comparative methods as it has provided the opportunity to explore holistic explanation through within-case and cross-case analysis. We were able to use the processual approach in examining real time issues linking them with intersecting conditions of context and theories from our multidisciplinary literature (Ragin, 1987). We have attempted to enhance the understanding towards micro-mechanisms in the implementation of a CRM system by linking the context (both internal and external) with the process.

3.3.3.5 A need to link process analysis to the location and explanation of outcomes

Finally we have attempted to link the process with outcomes in our study. As Pettigrew (1997) states, building an outcome into process research design has a number of advantages. The outcome both simplified and complicated our study by providing a focal point, an anchor for the whole investigation. Furthermore, we were able to compare the 'how' and 'why' variations across cases. We have achieved this by comparing the results in a cross-case analysis to highlight the similarities and differences from a knowledge management perspective. We have attempted to show how policy outcomes are shaped by the process and context and their impacts on the knowledge sharing mechanisms in our study of CRM implementation. We concur with Pettigrew (1997) and attempt to confirm that processual research is capable of generating sound knowledge not only of processes and outcomes but also of why and how outcomes are differentially shaped by processes.

We have been able to implement the deduction and induction cycle as stated by Pettigrew (1997) in our research. The cycle consists of the core questions of study leading to related themes and questions. Preliminary data collection then takes place resulting in early pattern recognition and early writing (our pilot chapter) disconfirmation and verification (testing of our methodology and refining the reviewed literature). This leads to elaborated themes and questions (our initial analysis chapter 4) resulting in further data collection (chapters 5 and 6), further pattern recognition and comparative analysis (chapter 7) ending in a more refined study vocabulary and scope for further research (chapter 8).

3.3.4 Choice of Sector and Sites

Data was collected from the previously mentioned two organisations using a data triangulation (data collection from multiple sources) and combining retrospective and real time analysis. Different industrial sectors were chosen (private and public sector). Using a theoretical justification employed by Pettigrew (1989) choosing of polar types to exploit planned opportunism was used and this approach produced an excellent opportunity for comparison and contrast. In order to increase the ecological validity of the findings two different, polarised organisations were chosen - one public and one private sector. The deviating patterns of the phenomenon under investigation between Birmingham City Council IT Services and IBM.COM were as follows:

- Differential customer base; as both the organisations have a differing clientele
- Differing goals; social goals vs. profit goals
- Complex and debated performance indicators vs. mainly quantitative financial measures
- More ill defined policy directives; complexity of policy implementation vs. relatively less ambiguous policy
- Relative openness of government and decision making; stress on representatives vs. relative secrecy; stress on business confidentiality
- Wide stakeholder base vs. primary focus on shareholders

- Extensive accountability vs. restricted accountability
- Primary resource base from public taxes vs. primary resource base from operational returns and borrowing
- Multiple values and goals; service, public interest, equity, professionalism, consumer participation, complex trade-offs vs. relatively restricted
- Statutory and parliamentary regulation; codes of conduct vs. board of directors; company planning frame works
- Needs of national economic management vs. market place signals, e.g. business lending rate

Source: Willcocks and Harrow (1992)

There were also similarities. These will minimise extraneous variations and help to clarify the findings in a specific environment (Eisenhardt, 1989; Willcocks and Harrow, 1992).

- Both are UK based
- Both are using a 'Vanilla' (off the shelf) type package
- Both have used the CRM system for about more than a year
- Both the organisations come under B2C category
- Both are also large organisations with a large customer base

The sites IBM.COM and Birmingham City Council were chosen as both the sites are using CRM systems to improve interactions with their customers. At the start of this research, both the sites had used the systems for more than a year. The deviating pattern of the adaptation pace of CRM implementation at both sites were investigated and compared to gain further insight and linkages between the existing theories regarding IT implementation in a CRM environment at a micro level.

The application of Information Technology (IT) has considerable implications for both private sector and public services organisations and their emergent models of management. According to Willcocks (1991) 'managing in' IT, and indeed its subsequent management may throw up common problems for

public and private sector organisations. The outcome of this study confirms the above and shows that irrespective of the differing sectors the CRM implementation has thrown up more similar issues and less differences in CRM implementation. An interesting finding has been that the distinctive contexts of the two cases have had fewer effects than the distinctive nature of CRM Systems and the implementation processes adopted. This study shows that irrespective of sectoral backgrounds the two organisations studied in this research failed adequately to address a range of common issues related to human behaviour, psychology, organisational characteristics, sub-cultural interactions and knowledge sharing. According to our research findings these factors have greater explanatory power for the results achieved than the distinctive contexts in which the two organisations operated.

Continuous contacts with both companies were made to establish a good working relationship. The joint meetings with my supervisor and the chief executives Alex Parsons (Chief Executive Operations IBM North) from IBM, and Bob Carter (Chief Executive IT Services) from Birmingham IT Services, enabled interaction between the academic and practical perspectives. Pettigrew (1997) recommends this degree and type of interactions in processual research, not least because it tends to support the production of rich, qualitative information.

3.4 Data Collection and analysis

The techniques for collecting the case study data included historical analyses, interviews and the taking of field notes. It worked well in our case research and was appropriate for this area of research, though there were several limitations and potential problems that have been identified as per Yin (1994) (see below). Data in this research was also collected through observations at both sites (Birmingham City Council IT Services and IBM.COM). The use of observation as a method of data collection is well documented (Bell, 1992). This was achieved through attending the staff meetings both at IBM.COM and Birmingham IT Services. This helped not only to refine the literature review, but also the research questions and the guidelines for the interviews. We discuss how our pilot has been instrumental in developing the process of this study in our next chapter. Below we discuss various methods used to collect data in this study.

3.4.1 Interviews

This research used, altogether, fifty (twenty for the pilot and thirty for the final data collection) semi-structured in-depth interviews to collect data from the subjects at IBM.COM and Birmingham IT Services. An in-depth interview is a direct personal interview in which a single respondent is probed by an interviewer to uncover underlying motivations, beliefs, attitudes, and feelings on a topic. It has a low degree of structure, a high proportion of open questions, a focus on specific situations and action sequences in the world of interview (King, 1994).

The interviewer used a topic guide to cover important subject areas but the direction of the interview was determined by the respondent's reply, the interviewer then probed for elaboration. Probing was important to obtain more information which a single answer to a question fails to do. It uncovered the hidden issues and helped in bringing out the truth. Probing was done by asking questions like "This is very interesting, can you tell me more about this ...?" and "would you like to elaborate on this please....?" This was relevant to the research questions in this case study where the uncovering of beliefs and attitudes was necessary to reveal the enablers and inhibitors to non-codified knowledge sharing in the implementation process of a CRM system.

The perception of inhibitors varied depending on who was being probed. The strengths of this method were the fact that it was flexible and could be used to address quite focussed questions about aspects of organisational processes such as a specific decision making process (King, 1994). This reinforced the usefulness of in-depth interviews as an important tool to find out the actors involved in the decision making of the CRM systems (at IBM and Birmingham City Council) and why they got involved and how they perceived their involvement in the implementation process.

Semi structured interviews were conducted on the basis of a loose structure consisting of open-ended questions that defined the area to be explored, at least initially, and from which the interviewer or interviewee could diverge in order to pursue an idea or response in more detail. Appointments for in-

depth interviews were made over the phone and the interviews were conducted face to face. Face to face method was chosen compared to the telephone interview method. As the telephone method has the problem of omission, i.e. the characteristics of an interviewee cannot be observed. It gave an opportunity to gather the information through observing the characteristics of the interviewees during the interviews.

An interview guide was used to help to keep the focus on the key aspects of the literature review (Pettigrew, 1997). The interview guide included a number of topics: introduction regarding the role of the respondent, usefulness of the CRM system, implementation process, stakeholder perceptions and Knowledge sharing to understand whether the system has been perceived successful or not.

The interviewees were informed about the subject over the phone and interviews were conducted in an informal manner to put the respondent at ease and to develop a good atmosphere for a relaxed conversation. All the interviews started with an informal conversation regarding the learning experience of the CRM system. Although the interviews in this research were semi structured with a broad set of themes, they were kept rather open in order to allow the respondents to develop their perspectives rather than be constrained by the perceptions of the researcher. Probing was used as a means of stimulating the flow of discussion where necessary.

Notes were taken during the interviews which were also audio taped by the interviewer. The note taking helped to gather information on what happened during the interview and will give an interpretation of the researcher on what was being said.

The variety of methods chosen created one useful form of triangulation. Semi structured in-depth interviews using the interview guide based on the empirical objectives were conducted throughout the second and third year of the study and companies were visited several times. This helped to establish and maintain good relationships with the subjects and the companies.

Interviews were conducted in two stages. The first stage was the pilot stage. The pilot helped to test the applied methodology and refine the research questions. It also refined the interview guide for the second wave of interviews with our respondents from both sites. The second wave of interviews was conducted after a period of six months to compare whether the stakeholder perceptions regarding the effectiveness of CRM system had changed.

3.4.2 Data Analysis

Having transcribed the recorded interviews, Colour coding was carried out. This process kept us in close contact with the data and helped us to link the relevant theories with the issues faced in the contemporary situations. This also facilitated searching, marking up, linking and reorganising of data in a short period of time (Denzin and Lincoln, 2000). The recurring themes were used as constructs in the initial analysis of the implementation at both sites.

Use of qualitative methods, including interviews and observation, is subject to wide variations and interviewer/observer bias and interpretation. Steps to minimize these biases include adequate training of data collection staff; comprehensive plans for data collection, validation and storage; and frequent reviews of data quality and interpretation. Data collection and management plans included immediate post-collection coding and review of data that are time (or memory) sensitive (e.g., interviews and observation).

A non disclosure agreement with IBM.COM and Birmingham IT Services was signed. The analysis conducted mostly employed non-sensitive information. Any sensitive information gathered from both the sites was treated with care and a mutual agreement was requested with respective departments.

To ensure the reliability and validity of this study the method of data triangulation was used to collect data i.e. data was collected using different means e.g. semi structured in depth interviews, open questions, probing and participative observation (Yin, 1994). The data from key stakeholders was then

compared to identify the similarities and dissimilarities across the cases using cross-case analysis. The findings of what IBM sub-cultures were compared with the findings of Birmingham City Council's sub-cultures. This enriched the final chapters and helped to make a theoretical contribution regarding psychological contracts and their interdependencies with subculture interactions and knowledge sharing. The contribution enhances our understanding towards Boland Tenkasi's (1996) 'mutual perspective taking'. We recognised throughout that the process of sifting and sense-making developed an interpretation of interpretations (Stanmark, 2000). The approach and assumptions of this research fall into the interpretive discourse as defined by Schulze and Leidner (2002).

3.5 Limitations of This Research

The literature was chosen under the themes of sub-cultures, psychological contracts, and knowledge sharing. The literature review itself also covered IT implementation processes, including Customer Relationship Management systems. The literature review focussed mainly on the tacit-explicit rather than explicit-explicit part of knowledge sharing. The actual research investigated all aspects of knowledge sharing for comparative purposes, but the major focus was on tacit knowledge and its sharing across sub-cultures in CRM implementation processes- as we saw, a neglected area in the literature. Other themes discussing the diffusion regarding technical innovation could have been included. However this would make the literature review very lengthy indeed.

The semi structured interviews took more time than anticipated due to the absence of key stakeholders during their vacation periods. The qualitative data collected needed a thorough analysis, which was very time consuming. This put a lot of pressure on time management and the quality of analysis.

Interview dates needed to be changed several times to suit the availability of the subjects. However a good relationship and professional attitude carried all the way through helped the interactions before, during and after the interviews.

Potential recorder bias, obtrusive influence and language assumptions could have affected the reliability and validity of the data collected. There were issues such as personal bias and subjectivity versus objectivity which the researcher had to struggle through to maintain the data as bias free as possible.

A quantitative measure could have captured aspects like the degree of involvement or degree of push and pull used during the implementation process, which was missed by a qualitative approach. On the other hand a qualitative analysis, such as 'cross-case analysis' of in-depth interviews where you take the similar views and put them together under themes, tend to go towards the generalization of a situation. In order to minimise the limitations identified, we undertook a piloting of the methodology described as a part of our processual analysis. The pilot helped us to test our methodological approach and refine the reviewed literature, aiding in refining our data gathering framework. We discuss the evolution of our methodological approach and research questions in more detail in the next chapter, namely Pilot/Initial analysis. We decided to include both our research sites in the pilot study in order to obtain an improved understanding of the contemporary situation of the CRM implementations at a micro level from knowledge management perspective. Here the use of Pettigrew's (1990, 1997) processual analysis was justified and enabled us to include both the cases in order to identify key stakeholders, existing sub-cultures and history and context of the CRM implementations at both sites.

Chapter Four

Pilot/Initial analysis Chapter

4.1 Introduction

This pilot intended to create an enhanced understanding of the contemporary situation at two organisations, namely Birmingham City Council (BCC) and IBM. It also provided the basis for a refined research question, refined the reviewed literature and tested the existing research methodology. In these respects the pilot chapter is essentially exploratory and refining, as part of our processual analysis. Thus the pilot was carried out as part of a Pettigrew (1997) type analysis, to understand the micro elements (in our research, the role of psychological contracts) in the process of implementation of a CRM (Customer Relationship System) system from a knowledge management perspective. The pilot intended to secure an improved understanding of the micro mechanisms and patterns of the implementation processes of CRM systems at both sites, in order to develop sense-making before the main study, and avoid the ‘death-by-data’ typical of more grounded theory type research approaches.

Initially this pilot chapter describes the summary of the reviewed literature, using Pettigrew’s (1985, 1990) framework to cover the history and internal context of IT implementation. However, this research gives a special focus to the ‘Process’ part of the implementation of a CRM system. Theories discussed in the literature review were used to complement Pettigrew’s (1985, 1990) framework. The same framework because of its suitability was then used to carry out an initial analysis of the contemporary situation at both research sites. The methodology section describes the techniques used to collect the empirical data and the methods used to maximise the validity of the same. The conclusion compares ‘Process’ of the two cases in a cross-case analysis. It also highlights the proposed analytical framework developed for the main research.

4.2 Reviewed Literature and Employed Framework

The literature review in our previous chapter discussed and critically analysed the existing academic understanding of IT systems implementation processes and their roles and impacts in organisational cultures. The review used Pettigrew’s (1985, 1990) framework to analyse the existing implementation theories, linking them with organisational culture and knowledge management as one of the key ingredients in the internal context (Pettigrew, 1985, 1990, 1997). It discussed sub-cultures and

subculture gaps from a knowledge management perspective. It assessed the roles of knowledge and its transfer across the key sub-cultures. Furthermore it assessed knowledge sharing aids/barriers across key sub-cultures (to be identified in our pilot) and the impact of these aids/barriers upon implementation. Moreover, it critically analysed the implementation of CRM (Customer Relationship Management) systems. Finally it concluded with the gap in the literature and the intended research contribution.

The themes emerging as a result of the review were used to complement Pettigrew's framework in an initial analysis of data gathered (1985, 1990). The results of this analysis were then used to revise and expand the framework as necessary. The revised framework and the refined research questions then formed the basis for further empirical work.

Research question (The research question gets refined through this pilot):

'How is tacit knowledge surfaced and transferred across key sub-cultures and with what effect on the adaptation and acceptance of a CRM system?'

4.3 Intended research contribution

At this stage in the pilot it was useful to state an intended research contribution. The research was intended potentially to benefit organisations where CRM (Customer Relationship Management) systems are implemented on a large scale, thus making it of crucial importance in investigating the details of mechanisms involved in the implementation process. The topic aimed to provide information that would facilitate deeper practitioner and researcher understanding of CRM systems implementation processes. The contribution of the PhD was orientated toward developing and integrating further the diverse areas that are relevant to understanding the implementation process at a micro level with a particular focus on CRM. As we shall see the intended contribution developed further, than this, and the eventual contribution is stated in Chapter 8.

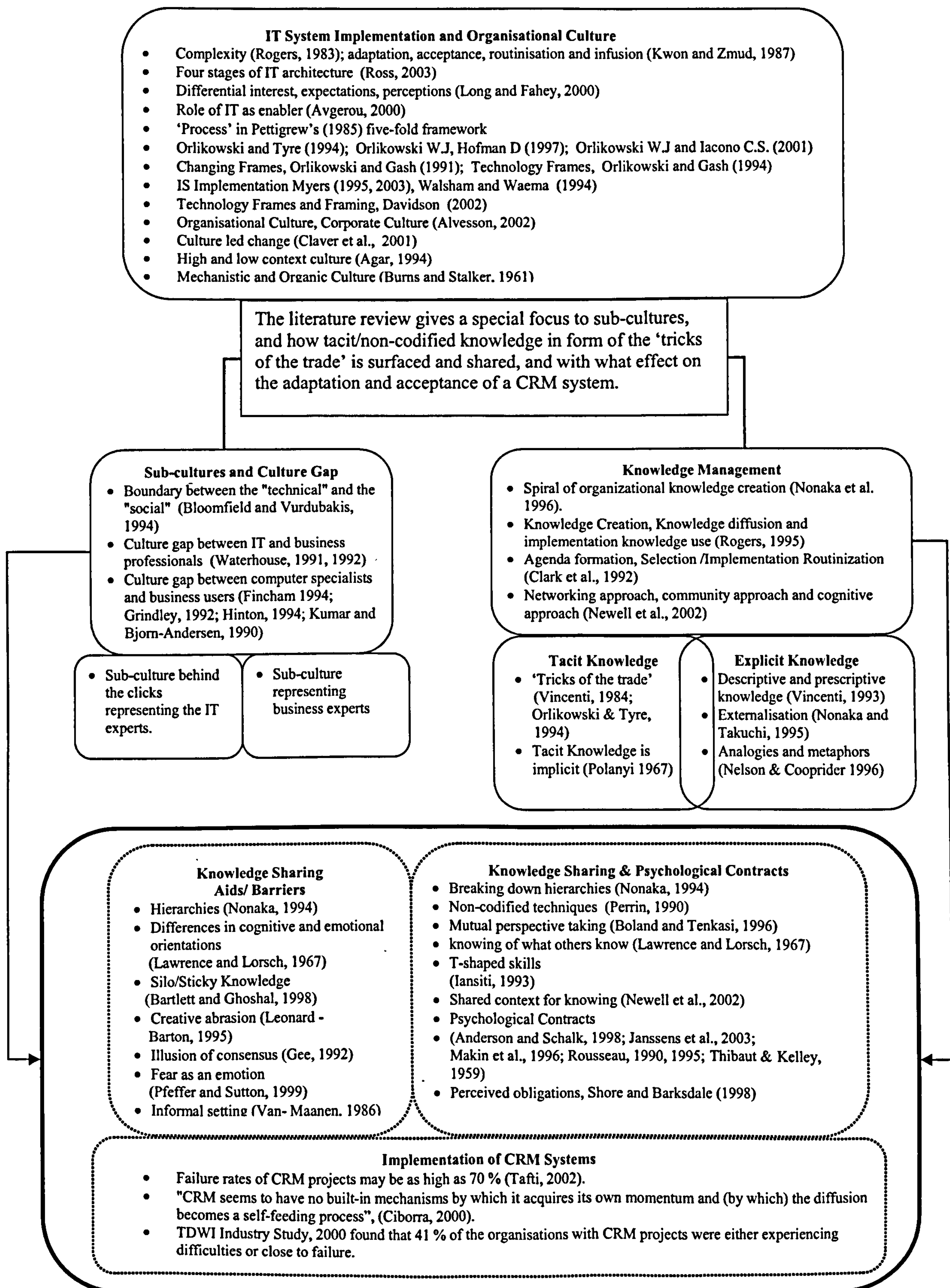


Figure 4.1 Hierarchies of Linkages between IT System Implementation, IT Implementation and Culture, and Knowledge Management Issues

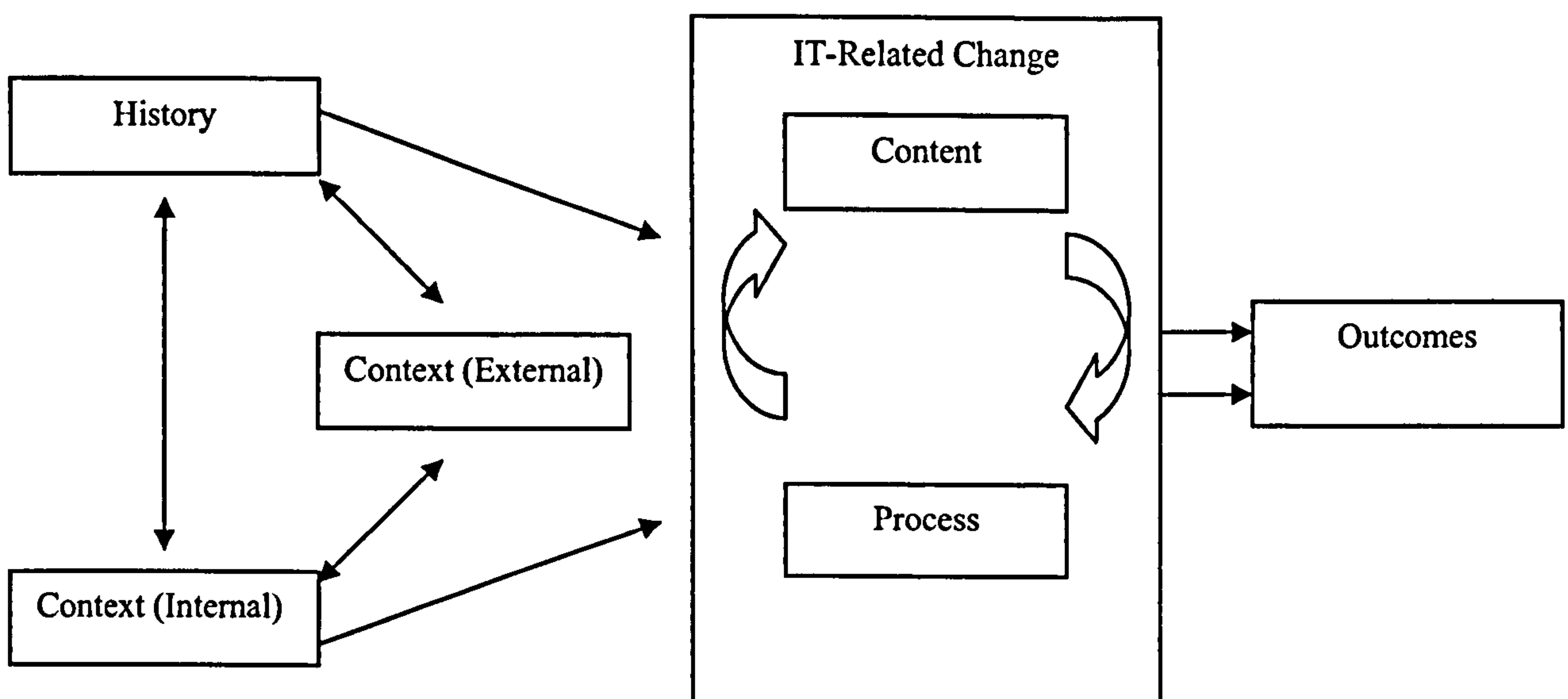


Fig 4.2 Framework employed for data analysis (Pettigrew, 1985)

This pilot used Pettigrew's (1985) five-fold framework, because of its suitability to this processual study, to analyse the internal and external context linking it with history (Pettigrew, 1997). Theories from the literature review and outside the review were used to analyse 'why' and 'how' issues in relation to the internal and external context at both sites. Time and history are central to processual analysis and act as building blocks enhancing the understanding of the contemporary situation at both research sites (Pettigrew, 1997). The pilot attempted (by amalgamating the analytic framework in figure 2.2 with Pettigrew's (1985) framework) to reveal the patterns embedded in these building blocks. These patterns emerged in the form of themes during the analysis of empirical data and helped in comparing the characteristics across the two research sites. The themes also related to theories regarding IT implementation, Culture and Knowledge Management, already discussed in the literature review. This justified the suitability of using of 'Five-Fold framework'. The framework evolved itself as it penetrated the micro elements embedded in the contemporary situation from a knowledge management perspective.

4.4 Methodology

This pilot used a comparative longitudinal case study approach to collect and critically analyse empirical data from both sites. The case study approach is the most commonly used qualitative method for research in information systems (Orlikowski & Baroudi, 1991). As the time allocated to do the pilot was short, the case study approach seemed to be appropriate to investigate the contemporary situation at both sites (Bell, 1992).

The techniques for collecting data from both sites included historical analyses, comprising the consideration of data from project reports and minutes of project team meetings; attending informal staff meetings and conducting interviews with stakeholders during both of which observations were made and notes were taken (Bell, 1992). The variety of methods chosen to gather data (historical analyses, interviews and taking of field notes) created a useful form of triangulation (Yin, 1994).

Interviews with stakeholders in the pilot were conducted in the form of semi-structured in-depth interviews. According to King (1994) an in-depth interview is a direct personal interview in which a single respondent is probed by an interviewer to uncover underlying motivations, beliefs, attitudes and feelings on a topic. It has a low degree of structure, a high proportion of open questions and a focus on specific situations and action sequences in the interview process (King, 1994).

Ten semi-structured interviews were conducted with the stakeholders of CRM systems at each site. The interviews were loosely structured consisting of open-ended questions mapping the area to be explored, at least initially, whilst allowing the interviewer or interviewee to diverge in order to pursue an idea or response in more detail. Interviewees included people from senior management, middle management and end-users of the CRM system at each site.

Appointments for in-depth interviews were made over the phone and most of the interviews were conducted face to face. An interview guide was used to help to keep the focus on the key aspects of

the literature review. The interview guide included a number of topics: introduction regarding the personal background and role of the respondent, implementation process, stakeholder perceptions regarding knowledge management, sharing and retention, and stakeholder evaluation to understand to what extent the system has been successful. See Appendix 1 for interview guideline details.

The interviewees were informed about the subject over the phone. Interviews were conducted in an informal manner to put the respondent at ease, which developed a good atmosphere for a relaxed conversation. All the interviews started with informal discussions regarding their learning experience of the CRM system. Although the interviews in this research were semi-structured with a broad set of themes, they were kept rather open in order to allow the respondents to develop their perspectives rather than constrained by the perceptions of the researcher. Probing was used as a means of stimulating the flow of discussion where necessary. Interviews were audio taped by the interviewer for which informed consent had been obtained. Notes taken during the interviews helped to gather information on what happened during the interviews. These also served to clarify the researcher's concept of what was being said.

Having transcribed the recorded interviews, colour coding was used to help in analysing the data. Colour coding helped to increase the consistency of the analysis. It also facilitated searching, marking up, linking and reorganising data in a short period of time (Denzin and Lincoln, 2000). The data from key stakeholders from both sites was compared to find the similarities and dissimilarities across the cases using cross-case analysis.

A non-disclosure agreement with IBM.COM was signed and BCC were suggested to do the same. The analysis conducted mostly employed non-sensitive information. Any sensitive information gathered from both sites was treated with care and a mutual agreement was requested with respective departments.

4.5 Case 1: Birmingham City Council (BCC)

4.5.1 Birmingham City Council's IT history linking the external and internal context (figure 4.2)

4.5.1.1 Origins and implications of outsourcing

During 1994 BCC made a decision to move from a centralised IT structure to increased autonomy over buying in and outsourcing IT services by departments. As a result, the role of central IT became more of a support function.

According to Tricia Thrupp (CRM Project Manager), 'Vanilla' or off the shelf applications seemed to be popular in BCC as they required less in-house expertise.

According to former head of IT, Tony Glew, in-house implementation and development expertise during that period was limited. It lacked, in particular, the programmers; IT expertise was in the form of business or system analysts. BCC didn't have any programmers or any really technical people on-site. When they chose new packages they really had to be good, and not require a lot of technical skill to make them work (Tony Glew). As a result the role of the central IT centre was diverted into supporting departments which would go out to buy solutions to meet their individual needs (Tricia Thrupp). BCC were keen on setting up an integration strategy.

IT solutions at BCC were bought in by different departments with little regard for cross departmental integration resulting in technology bottlenecks (Holland and Ben, 1999). According to Tony Glew and Tricia Thrupp the pattern of outsourcing the programming to IT NET and buying of hundreds of solutions continued for many years. Tricia further states that BCC has realized over the last few years that it is not efficient as an organisation and a lot of things that it is doing with the re-organisation of IT is about trying to re-establish standards. The sub-cultures formed as a result of the above IT autonomy may have different interests, expectations and need further investigation.

4.5.2 Outer Context

According to the Office of the Deputy Prime Minister (2000), Birmingham City Council (BCC) has been given the task of ensuring that all the services are available to the citizens through electronic means by 2005. This has put some pressure on the BCC Public services. According to the directive BCC needs to exploit new technology to meet rising customer expectations successfully in the same way as the private sector if they are not to be accused of delivering poor quality services. The above illustrates the government deadlines and speed of new legislation that Willcocks and Margetts (1994) talk about as pressure factors exposing the organisations towards consultant and supplier markets.

4.5.3 Internal Context at BCC (figure 4.2)

Under this section the culture of the BCC, in particular the sub-cultures and subculture-gap using the theories from the literature review are discussed (Louis, 1985; Fincham, 1994; Grindley, 1992; Hinton, 1994; Kumar and Bjorn-Andersen, 1990).

Several sub-cultures were identified during this pilot at BCC. The CRM project was originally perceived to have an IT-led approach. The revised approach after Tony Glew left was perceived as business led. According to James Druary (Contract Manager, Corporate Customer Relations), one group of people (led by Tony Glew) had a positive attitude towards CRM implementation with an integrative approach, while the other group (led by Sarah Wood, Strategic Director of Resources) had a 'call-answering' focus. The group of people with the 'call-answering' or non-integrative approach were more concerned with answering the calls as the main priority.

The above indicates a cultural gap between the social and technical (Bloomfield and Vurdubaki, 1994), that is, in this context, between the human resource department, service agents, end users, and some managers on the one hand, and the programmers, IT technicians, developers and systems analysts on the other.

The public was not getting through over the phone, and that had caused great concern within BCC. This triggered politicians to look for ways forward. The IT led group which included, Tony Glew, David Hall (former CRM Project Manager) and the CRM consultant Bill Newman were concerned about establishing a strong link between the front-office and back-offices using a middleware to integrate the system (Holland and Ben, 1999; Louis, 1985). The middleware designed was not being sufficiently effective to start with. This was slowing down the progress of implementation. Hence, a non-integrative approach, under the wings of Sarah Wood supported by Julie Bullen and other like-minded people, was taken on board as a better alternative. The problematic nature of the differing cultures, one stemming from the IT background (Tony Glew) and the other from the financial background (Sarah Wood) created a hurdle with some serious consequences in the form of people leaving the project thus slowing down the progress (Bloomfield and Vurdubaki, 1994; Price Waterhouse, 1991, 1992).

A culture decision within the organisation to give departments more IT freedom took away the central control and weakened the influence of corporate culture on the departments. Every department has got different solutions as it was always cheaper to go and buy off-the-shelf proprietary systems. Problems arise when different departments want to communicate with each other using system integration (Tricia Thrupp). The departments have gathered knowledge over the years that they may find hard to release without seeing any clear benefits. Individuals sitting with certain knowledge may have fear of losing their power or position by releasing their knowledge completely (Davenport et al., 1998).

To make the knowledge, residing in the above mentioned vertical silos, mobile across the departments at BCC is important according to Leonard-Barton and Kraus (1985). The knowledge possessed by the departments can be in explicit or implicit state, both codified and non-codified (Perrin, 1990). In other words, it can be in descriptive, prescriptive or tacit form (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995). It becomes vital to investigate the elements that facilitate the sharing of knowledge residing in various forms across the departmental sub-cultures at BCC.

4.5.4 'Content' of IT related change (figure 4.2)

BCC was concerned about their public call-answering capacity. According to David Hall, an internal evaluation done by Birmingham City Council (BCC) showed that less than 10 percent of people could get through on their first call to BCC. BCC had been looking at establishing a corporate contact centre for a number of years.

BCC started looking at establishing a corporate contact centre. As explained by Tony Glew, one of the key requirements identified was the need to set up some form of corporate access database. By doing so, they could record and monitor the contacts and “that would be an important component of any contact centre that was established - and that’s when we started looking at CRM as an issue” (Tony Glew). The above statement describes the BCC rationale for a CRM solution. They intended to use a CRM system to improve the call-answering service to their customers.

The CRM project doesn’t seem to have a project champion. However, the idea of a CRM system was enthusiastically endorsed and sponsored by the chief executive, Sir Michael Lyons. David Hall further adds that the chief executive was most keen to improve the communications with the public and felt that everything was too diverse and too spread over the Authority. There needed to be a greater focus on receiving communication from the public. “The Chief Executive, Sir Michael Lyons, saw a very good working call centre in Brisbane and suggested having one in Birmingham once he got back” (David Hall). The above, indicates that the project had a project sponsor in the form of the Chief Executive (Goodhue et al., 2002; Willcocks and Sykes, 2000).

From there on the CRM project started to take shape and develop. Several key events took place before the system went live. A description of key events during the implementation may help to enhance the understanding regarding the implementation process of CRM system at BCC.

4.5.4.1 CRM idea is born

Tony Glew started to work with the idea of a CRM system as a solution to BCC call answering problem. Tony further adds:

“There’s another key character, who is still working here called Gerry McMullen. Gerry is brilliant. Gerry sees things, brings them all together and if you ask the right questions, out it all comes into a strategic whole. It was Gerry that told me, ‘This is what’s it’s really about, Tony, not just answering the phone but connecting the agents to the back-office systems and logging everything in the middle.’ That was critical and Gerry and I talked about it all the time. Gerry got it spot on and it was really really important. So immediately we started developing the idea for a government computing conference.” (Tony Glew)

According to Tony Glew, the first big presentation on CRM was in 1999 to a government computing conference and on that occasion Tony Glew had expressed the idea of every authority in the country having its own CRM but all linked together through the Internet, so any citizen anywhere could actually link into the CRM. Tony’s idea was received positively. The Deputy Leader of the BCC (Andy Howell) was interested in promoting modern techniques. He got Tony Glew and Sarah Wood (Strategic Director of Resources) together and gave them the go-ahead regarding a CRM project. At this stage Sarah was more concerned about answering the calls more effectively than anything else (Tony Glew). Significantly Tony and Sarah held different and potentially conflicting underlying views which did not surface until a later stage of the CRM project (Pliskin et al., 1993).

Wathne et al. (1996) argues that factors such as accuracy, timeliness, adequacy and credibility of interactions influence perceptions of honesty and openness, and are essential to achieving more frequent and relevant knowledge sharing between the partners. A creative abrasion between Sarah Wood and Tony Glew at an early stage of the CRM Frontline project could have helped to create a ‘shared context for knowing’, leading to a mutual perspective and thus could have facilitated

knowledge sharing between the two and even across the sub-cultures (Newell et al., 2002; Boland Tenkasi, 1996).

According to Krogh, G. et al. 2000) effective knowledge creation depends on the physical, virtual and emotional context of an organisation. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. The relationship between Tony Glew and Sarah Wood was not felt to be reciprocal. This resulted in lack of trust from both sides. The psychological contracts as a result of conflicting ideas may have been based upon differing motives. A mutual perspective towards CRM Frontline was absent (Boland and Tenkasi, 1996).

4.5.4.2 Outsourcing of implementation ('Content', Pettigrew, 1985, 1990- figure 4.2)

According to Tony Glew, BCC wanted to outsource the implementation. Consultant Bill Newman, who had a good track record, was employed during May 2000 (Tony Glew). However, much of his experience was from the private sector which differs from the public sector (Willcocks and Harrow, 1992). Together with Bill Newman, three more consultants were hired (Tony Glew).

Tony Glew pointed out that one of these consultants was John Harlow, who had a background in work study for over 20 years in the public sector. He also had experience in call centres and script design. He was hired to do business process re-engineering in terms of process analysis in relation to the targeted areas for a contact centre. According to David Hall, Peter McMahon and Derek Forland were the other two consultants. David Hall further adds that their initial role was to investigate neighbourhood offices and council tax. Bill Newman's role was to manage the consultants and also to act as an advisor to Tony Glew (Former Head of IT). The consultants hired however lacked specific knowledge of BCC culture and its operations.

4.5.4.3 Selection of supplier

Tricia Thrupp states that from May 2000 onwards BCC were going through a process of putting requirements together with a view to going out to tender. She further adds that there were also some presentations from suppliers. Fourteen were invited, of whom five replied. Lagan was chosen (Tricia Thrupp).

The criterion against which Lagan was selected was best value, which was expressed as a 70/30 split, 70% functional, 30% cost for the procurement. Lagan won on all counts and Sarah Wood agreed to put in a contract with Lagan even though they were a small company. BCC took Lagan on board with their partner, called Cavendish, and that was part of the strategy. Birmingham had 39 people facing systems, so the idea was, *"We'd better get in bed with somebody who's very good at doing integration, because we aren't."* (Tony Glew)

BCC entered into contract negotiations with Lagan, provider of the software called Frontline. BCC also went on a site visit to Sussex Police in Brighton during October/November to observe their gazetteer using a CRM application. In December 2000, the decision to take on board Lagan was made. The contract was signed with Lagan during March 2001. Keeping in view the limited programming expertise in BCC an off-the-shelf package was chosen. It could be configured and implemented fairly quickly. There were also possibilities for back-office integration through in-built XML facility in the package.

4.5.5 'Process' of CRM Implementation (figure 4.2)

This section covers the 'how' of the implementation - how things were done and how they were perceived by different stakeholders. It discusses the staff retention issues, user/stakeholder commitment, project team experience, and user training (Pettigrew, 1985, 1990, 1997)

4.5.5.1 Staff Retention Issues

4.5.5.1.1 Appointment of a Business Manager (Julie Bullen)

During Jan 2001, Julie Bullen was appointed as a Business Manager for the CRM project. According to Bob Carter, temporary head of IT:

“It was felt that the project was over-weighted with IT and light on business need. The business need according to Sarah Wood, Strategic Director of Resources was to bring back the focus towards call answering issues.”

The number of people who could actually get through to BCC was as low as 10% on first call. This business issue was identified in the Citizen Mori survey (Bob Carter, Temporary Head of IT).

4.5.5.1.2 CRM project manager (David Hall) resigns from the CRM project

David Hall was the CRM Project Manager at the point when Julie arrived during May 2001. Julie Bullen and David Hall got off to a bad start (Tricia Thrupp). David Hall got on very well with the consultant, Julie did not. This could have perhaps caused some of the problems:

“It was a delicate issue but perhaps it did come down a lot to personalities at the end of the day.”
(Tricia Thrupp)

According to Tricia Thrupp, shortly after that, when Julie arrived and had different views about how the project should be run, it was felt better that perhaps David Hall leave the project. Furthermore to the arrival of Julie Bullen as business manager, the project changed direction towards a call answering focus and away from the integrated approach focus. David Hall did not share that view either and left the project. That is also when Tricia Thrupp became the CRM Project Manager. According to Julie Bullen the team needed to be refreshed:

“My management style is different to Dave’s management style, I had clear views about where I wanted it to go and they didn’t quite fit with the views of both Dave and the consultant (Bill Newman). I didn’t feel there was enough business ownership so I decided that we needed to refresh the team.”

David Hall was quite upset about the whole situation and felt let down by the senior management, as he was there before Julie arrived. According to Julie Bullen:

“It got very personal - he was very personal - he made personal comments towards me - was very upset because he’d been on a commission a long time for the Council - not a lot of output, and I saw him for what he was really.”

The non-reciprocal psychological contracts present between Sarah Wood and Tony Glew can also be seen between Julie Bullen and David Hall. A process of ‘mutual perspective taking’ where distinctive individual knowledge is exchanged, evaluated and integrated with that of the others in the organisation, was missing in the above case too (Boland Tenkasi, 1996).

4.5.5.1.3 Head of IT (Tony Glew) left BCC

Sarah Wood wanted to outsource the call centre management to Vertex, partners with Lagan. Tony Glew on the other hand had a view that it might slow down things. He was keen on back-office integration in the system. His view was shared by both David Hall and Bill Newman. Strategically Sarah took a different view, “Her view was ‘To hell with boys playing’, she said, ‘But much more important is - Get the telephones answered!’” (Tony Glew). Tony Glew gave six months notice before leaving during October 2001. Time for “Toys for boys” (Ian Paterson, Tony Glew) was over and contract with Vertex was signed.

4.5.5.1.4 Change of direction in the 'Process' (figure 4.2)

Sarah Wood decided to outsource to Vertex as Tony Glew left during Oct 2001. Outsourcing to Vertex was more of a political decision as there were issues with regard to the performance of officers providing service. Andy Howell appeared to be the person pushing this idea forward.

In April 2001 consultant Bill Newman presented a report to Sarah Wood, in which he promoted the idea of integration between front and back-office using Frontline. That idea was never acted upon. Bill Newman was relieved of his services. The rest of the consultants were assigned the role of designing scripts for the contact centre (David Hall).

Bob Carter states that the management of the contact centre was given to Vertex. In normal circumstances the City Council would have moved all the call centre staff over to the contact centre, which would have necessitated transfer of undertakings legally. The politicians were not prepared to do that. According to Bob Carter they seconded people from BCC to Vertex. In this arrangement, the management of the staff was done by Vertex. However, all the staff's terms and conditions were managed by the City Council (Bob Carter).

4.5.5.2 Stakeholder commitment

BCC CRM had senior management sponsorship in form of Sir Michael Lyons, the chief executive, who saw a CRM system in action on his trip to Brisbane. According to David Hall:

"Andy Howell saw this as a good opportunity to kill two birds with one stone. One, this would eliminate the call answering issues that the city was having. The second, that implementation of a CRM system will be in line with the government directive." (David Hall)

Both Tony Glew and Sarah Wood bought the idea initially. However, as they started to work on the implementation plan, their differing opinions became more explicit and their psychological contracts became more individual than mutual. Tony Glew was perceived to be IT-led, whereas Sarah Wood wanted to focus on resolving the issue of public calls not getting through to BCC. They may have

started with a mutual understanding on the surface (Anderson and Schalk, 1998). As they interacted more closely and creative abrasion took place, the implicit part of their psychological contract became more explicit (Makin et al., 1996). It could be that at least part of such a psychological contract was implicit, resulting in a lack of clarity for both parties (Makin et al., 1996).

Creative abrasion can positively influence the performance (Leonard-Barton, 1995). In the above case, however, it created a divide and slowed down the CRM project. This also resulted in Tony Glew's resignation and subsequent suspension of the original 'Frontline' development in favour of the revised 'Contact Birmingham Frontline' solution.

The arrival of Julie Bullen as business manager changed the direction of the project towards a call-answering focus and away from the integrated approach focus. David Hall did not share that view either and left the project. This narrowed down the stakeholder base. There were also hopes to keep the customer contact centre internal. As Richard Budden (Business Manager, Environmental Services) states:

"we'd been working on the assumption, all the way through, that the call centre would be set up but it would probably be internally run and managed and it was a bit of a shock to some people on the group that hang on, because I think some people had sort of seen roles for themselves within the subsequent development of the organisation and I'm going to run this and I'm going to be doing that as we were sort of bought into it, and that was suddenly taken away and it was going to be a managed service. So I think at that point a lot of people probably lost a little bit of interest."

Other changes at the senior management level influenced subsequent developments. According to David Hall, deputy leader Andy Howell remained in the picture for a while providing support to Tony Glew and Sarah Wood. Sir Michael Lyons left with 12 months' notice.

4.5.5.3 User training issues in the ‘Process’ of IT related change (Pettigrew, 1985, 1990, figure 4.2)

The training provided by Vertex to the contact centre agents was more in the form of descriptive knowledge, which included what the system can do and how the written scripts can be used to answer the incoming calls (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995). However there were some issues regarding the training.

“I felt it was inadequate, I felt it was poorly managed, I didn’t feel that the trainers were aware of how to utilise the system any better than the people they were training.” (Abid Hayat, Contact Birmingham Duty Manager)

“They hadn’t for instance, (they didn’t deliver) very high quality training materials to go with the training so the staff were, having been trained, walking away and not having anything they could refer to.” (Tricia Thrupp)

“I think we neglected, I think we could have spent more time on helping Vertex employees understand how the Council works.” (Julie Bullen)

Training provided by Vertex did not impress the BCC staff and management. However, this could be due to the fact that Vertex did not have enough knowledge about BCC departmental culture. Their interactions with BCC were not on a prolonged basis, and may not have allowed any creative abrasion to take place (Newell et al., 2002). This resulted in a training which perhaps was not based on ‘mutual perspective taking’ (Boland and Tenkasi, 1996). A reason, behind a lack of ‘mutual perspective taking’, could have been that there was an agreement on senior management level which may have had a mutual psychological contract. However, it was not shared by the people on the floor. According to Leonard-Barton and Kraus (1985) it is important to plan for the transfer of knowledge from the old operations, in which people knew the materials and the product very well, to the new processes. They further argue that the developers of the new process often know their tools well, but rarely do they

understand the materials and processes to which their software is applied or the people on the floor who have been working with both for years. In the above situation secondees from the back-offices were put in the contact centre environment, however their knowledge was not exploited to complement and enhance the quality of the end-user training.

The BCC senior management when signing the contract with Vertex may have had an illusion of consensus which did not expose the innermost feelings of individuals involved (Gee, 1992). Hence it resulted in inadequate training material and lack of communication between the parties. The BCC staff were more trained and experienced with considerable codified knowledge regarding BCC and its culture. More than half of the contact centre staff were existing BCC staff as secondees. Their training needs may have been different from those of any new-comer (non-secondee).

4.5.5.3.1 Observations on the way in which the system went live

“To start with, five BCC services were supposed to go on board with Frontline. This got reduced to three. It was very much a political directive as to which went in and which did not. BCC did an awful lot of work with Leisure, and then all of a sudden they dropped Leisure because Revenues became more important, so they just had to dump all the Leisure work.” (Tricia Thrupp)

Furthermore the pilot testing did not involve a collective testing. Each department did their own tests with the system. This did not enable any close interaction between the different departments. Hence, the opportunity for any prolonged creative abrasion to take place, as recommended by Newell et al. (2002), was not there. Different departments may also have had different psychological contracts. These differing psychological contracts may have inhibited the free flow of knowledge from one department to another. The sense of shared benefits which could have helped in the mobility of knowledge silos and hoarding has been missing at the departmental level.

There was no external customer involvement in the process of implementation of Frontline. BCC had tried it before and it did not work. According to Bob Carter:

“It was much better to take something to the citizens, get it changed and validated, rather than giving them a blank piece of paper and saying, ‘This is what we are going to do. How do you want to do it?’”

The system went live in March 2002. This included the contact centre using the Frontline solution/software, providing services for Environmental Waste, Neighbourhood Advice and Council Tax. Prior to that, from about July/August 2001, a pilot of the CRM system with Environmental Services was done, which was one of the first service areas that went live. However, the system went live without physically having a contact centre in place. It was done in the existing office. The product was used to see how it interacted with BCC’s back-end system and what values it generated and problems it caused. There were some major issues with that pilot, around the technical side in getting it to talk correctly with the back-end system. Another issue was that Environmental Services at that point were in the process of renewing their back-end system. Difficulties with the pilot indicate that a clear purpose, well defined and communicated, could have been missing (Leonard-Barton and Kraus, 1985).

4.5.6 ‘Outcome’ (Pettigrew 1985, 1990) in the CRM implementation at BCC

Outcome in this case is discussed in terms of how the system process is shaped by the internal and external contexts and how the process has affected the performance of the users of the system (Pettigrew, 1997).

4.5.6.1 The window of opportunity for adoption started to close (Orlikowski and Tyre 1994)

As the users of the system become more familiar with the systems and its strengths and weaknesses, the workarounds, the shortcuts and the tricks of the trade started to surface (Vincenti, 1984; Orlikowski, 1996; Orlikowski & Iacono, 2001).

According to Catherine Colbourne (non-seconded end-user, Contact Centre, Birmingham) to start with, the call centre agents tried to use the Frontline CRM system as much as they could but as time passed

they started to realize that answering the calls was taking too long. So they started to make notes while answering the calls using the system as little as possible.

Interviews with the agents showed that they have learned to take notes manually while on call and then after the call put the logs on the system. This is the case especially with agents from the revenue and benefits section. A brief interview with the recruitment section showed that they use Frontline CRM for salutation purposes only. They then have to log into the back-office system separately. This is the case with both benefits and revenues departments according to Catherine Colbourne, non secondee, Contact Centre Birmingham. This shows that, as the system adaptation time passes people are finding new ways of working with the Frontline system. One way is using it as little as possible. The system is getting adapted by the users rather than users adopting the system (Orlikowski and Tyre, 1994). The ‘tricks of the trade’ and shortcuts that are discovered as the system gets adapted by its users, would be worth investigating further.

4.5.6.2 Differing perceptions, interests and expectations (Long and Fahey, 2000)

Derek Lee from Neighbourhood Office wanted his department to play a leading role in the CRM Frontline implementation. He suggests that the Contact Centre should have been under their responsibility. The contact centre (Vertex) management at BCC has differing perceptions regarding the CRM Frontline. Some seem to have an opinion that CRM Frontline is doing what it is supposed to do. In other words, providing help as a tool to answer the incoming calls.

The benefit with the externally managed contact centre has been that there are, within the contract, clear quantifiable performance indicators that say, ‘Yes, X number of calls have got to be answered to hit a certain percentage call rate’. However there are quality issues according to Richard Budden that need addressing. The eventual aim is that Frontline CRM would be a fully integrated solution and then BCC would start to get benefits. Training has improved, according to Abid Hayat. Some feedback from the staff has been picked up by the trainers and resulted in some improvements in training the

new comers (Vincenti, 1993). However, according to our reports, some of the contact centre advisors still do not see Frontline system, as a facilitating tool and are quite sceptical about it.

The contact centre managed by Vertex went live in March 2003. It is divided into three sections. Section one has advisors handling calls regarding Environmental Services and Neighbourhood Advice. Section two deals with Benefits and Revenue. Section three (gone live Jan 2004) deals with Recruitment Services. Advisors in all the sections use Frontline CRM system to read scripts, in order correctly to use the salutations.

According to Tim Charge (IT programmer) in handling the calls related to the environmental services the Frontline system uses a middleware called 'Connect' supplied by a company called MVM, to interact with the back-office system called 'Panorama'. The matters regarding which the call centre agents are able to provide help to the callers are information requests and specific issues such as programming the disposal of bulky waste items or missed bin collections. However, not all the call centre agents have access to the full version of Panorama. Only the BCC secondees are given full access (Richard Budden, Environmental Services Department). This means that non-secondees with a customer query pass on the information manually to the secondees in order to achieve a resolution.

Secondees from BCC were trained separately from non-secondees in the Frontline CRM system. A collective training of call centre staff could have provided an opportunity for the staff to interact with each other on an informal basis. Such interaction on an informal level might perhaps have helped to start the process of 'mutual perspective taking' (Boland and Tenkasi, 1996) and a shared ownership, potentially leading to 'mutual high-obligations' psychological contracts thus facilitating knowledge sharing (Shore and Barksdale 1998).

According to Abid Hayat secondees carried with them the BCC culture, whereas the non-secondees hired by Vertex to handle the incoming calls did not. Secondees were more aware of the process loop in handling incoming calls because of their BCC background. This knowledge possessed by the

secondees has not been exploited fully. The training was short, only three to four weeks according to Abid Hayat and was different for secondees as compared to non-secondees (Wathne et al., 1996). 'T-shaped skills' and 'knowing of what others know' could not be fully developed due to the shortage of time and lack of prolonged cross-cultural interaction between secondees and non-secondees (Bakhtin, 1981; Krauss and Fussell, 1991; Lawrence and Lorsch, 1967; Iansiti, 1993). According to Abid Hayat there is very little interaction between the three sections present at the contact centre. The chances of creative abrasion taking place are limited. The common coffee or lunch room is mainly used by the recruitment services. The limited interaction that takes place is in more formal types of setting. Lack of informal settings may work as an inhibitor to the transfer of 'tricks of the trade' at the contact centre. This combined with lack of 'mutual high-obligations' psychological contracts due to the departmental subculture (Shore and Barksdale, 1998) and vertical knowledge silos may have inhibited knowledge sharing across the departments and between the front-office and back-office in a CRM environment. The above knowledge sharing phenomenon needs to be investigated further to understand the impact of psychological contracts and subculture interactions on non-codified knowledge sharing. For an overview of the initial analysis of the contemporary situation at BCC, see the following page.

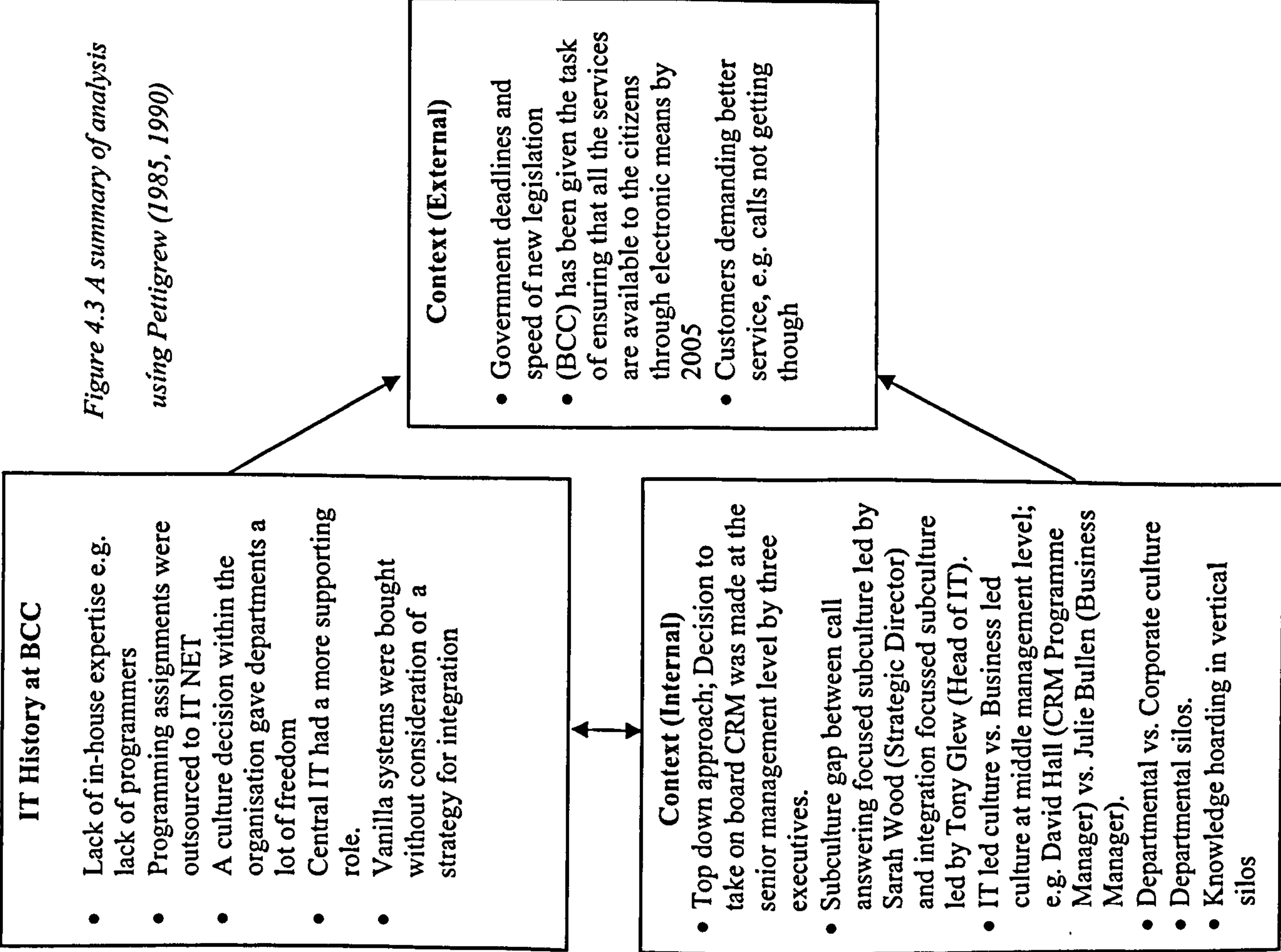


Figure 4.3 A summary of analysis using Pettigrew (1985, 1990)

4.6 Case Study 2: IBM and CRM Siebel Implementation

4.6.1 Background: History and Context

IBM finished 2002 with revenues of US\$81 billion. IBM ranked number one on Fortune magazine's 2002 "Ten Most Admired Companies" list (IT category). IBM also received the most U.S. patents—a record 22,257 in 2002—for the tenth consecutive year. The company makes a broad range of computers, including PCs, notebooks, mainframes and network servers. It also develops software and peripherals. In addition, IBM owns Lotus® Development, maker of the Lotus Notes® messaging system, and Tivoli® Systems, which develops tools that manage corporate computer networks. About 60 percent of IBM's sales are to customers outside the United States. There was a change of chief executive officer with Sam Parmizarno replacing Lou Gerstner in 2001.

According to Vince Ostrosky, Vice President, Customer Relationship Management (CRM) at IBM, IBM's internal implementation of Siebel eBusiness Applications is a story about change on the smallest, most personal scale. It is about changing the way IBM serves its customers, one by one. It is also about changing the way IBM employees access timely customer information, individual by individual. Looked at from another angle, however, it concerns IBM employees and Business Partners around the world moving to a single view of the customer and accessing that customer information anywhere, in real-time. It is about enabling fast, convenient service for customers worldwide, and improving the way major, global IBM divisions collaborate with each other and their business partners. In short, it is about one company's determination to become a more globally integrated, customer-focused company, with unprecedented speed and scale, responding to whatever means the customer chooses to do business with IBM:

"Our goal is to be viewed as one IBM by our customers and to work as one IBM internally. We're aiming to make IBM best of class in its industry for sales, marketing and customer service excellence. We believe we can achieve this goal by using Siebel applications to leverage our existing strengths as a market-intelligent enterprise." (Vince Ostrosky, Vice President, Customer Relationship Management IBM)

4.6.2 IBM Internal Context

Focusing on sub-cultures these were observed at three levels: Senior management level, Pre-Deployment Team (PDT) level and within the PDTs (end-user sub cultures). CRM legacy data was in a poor state. However, this was not discovered until the data migration began. Hence stakeholders from the senior management may have had a different perception regarding the contemporary situations in the various business units. The differing perceptions of stakeholders were influenced by their different interests, expectations and power (Long and Fahey, 2000). Senior management underestimated the amount of post-implementation training needed for end-users. Consequently after the initial user experience, they had to set up workshops to assist with user queries regarding the new system. The learning-on-the-job method did not seem to work particularly well:

“We needed a better transition plan - 30 to 45 days out - as to ‘what do I do now’ as opposed to just assume that they would have everything - that they would learn ‘kind of’ on the job.” (Steve Wright, Vice Chairman, World CRM Deployment)

There were also team hierarchies at different levels:

“There was one team but it had lots of different dimensions, so we had one team at the world wide level and then we had three individual geography based teams, one for the Americas, one for Europe and one for Asia Pacific.” (Peter Cross, CRM Operations Manager)

The decision to take on board CRM Siebel was made at the top level in December 1999 by three executives.

4.6.3 Content and Process of Implementation

The section covers proposed changes, including their substance, and how things were done and issues perceived (Pettigrew, 1985, 1990). This is discussed in terms of the rationale for CRM Siebel, the type of approach employed to implement the CRM Siebel (big bang or phased). It will also discuss how the

project was managed and what support was made available during the implementation process of CRM Siebel. Furthermore, issues regarding user training and user commitment are also discussed.

IBM had already implemented hundreds of customer-focused applications internally. However, each was dedicated to a separate business division. Previous initiatives were unable to provide a global customer overview. Enterprise-wide CRM technologies like Siebel eBusiness Applications had, in 1998, just arrived on the market. These packages were geared to help companies like IBM achieve a higher level of consistency and responsiveness, and eliminate building CRM functionality internally from scratch, thus enabling rapid execution. They are also designed to eliminate the headaches of inconsistency across multiple divisions or business units. IBM wanted the business to have a consolidated view each time it interacted with its customers. For a company as big and as complex as IBM, this was no easy feat. They decided to replace most existing CRM applications with a single system called CRM Siebel. This posed a great challenge regarding the implementation of CRM Siebel in 160 countries with 11 lines of business.

The initial rollout was to 26 IBM.COM call centres. The CRM-driven change included everything from acclimatizing call centre agents to a new user interface to shifting voluminous, disparate customer data onto a common database, re-engineering sales processes and, eventually, creating a global helpdesk:

“This deployment demonstrates again that we can do it all from design, implementation and processes to hardware, software and middleware. The only other way to accomplish this would be to form partnerships, but that would require integration since components would be less likely to work together.” (Cher de Rossiter, IBM CRM Project Executive)

The contract with Siebel was signed in January 2000 and negotiated during that period. According to Steve Wright, IBM had agreed to a plan of phased deployment both geographic and potentially functional in its design in the second quarter of year 2000. Implementation started with additional

functionality to the IBM.COM call centre community in North America, firstly in Smyrna Georgia. Then it expanded horizontally, meaning into other call centre organizations in North America and then into EMEA (Europe, Middle East and Africa) and to Asia Pacific through 2001. Additional functions rolled out to North America and subsequently in the European geographies, East Africa and Asia Pacific. The second set of functionality (launched January 2002) was originally agreed to, in its basic form, as activity management where the users of the Siebel environment of CRM system could make requests to others on their team within and across their organizations. After that second wave of function, IBM started to add functions simultaneously across all three geographies (the Americas, EMEA and Asia Pacific) because they knew now that they could do that based on the success of the first two waves.

During May 2002, the third release was the ability to share customer leads with IBM's external channels, their business partners. IBM simultaneously deployed 'lead management' across all three geographies. This was done within a three week span over all the geographies, excluding Japan, Korea, Taiwan and China. The fourth release IBM delivered was field sales support. This concluded the three major elements of the sales process, including opportunity management, activity management and account management. Opportunity management is critical to IBM's sales process, activity management is a function deployed as their second functional wave, while contact and account management represents the new area of managing customer contact information.

During 2003, they were in their fifth wave of marketing capability to be deployed in North America and EMEA. During the period of review (2003-4) deployment was on hold in Asia, with a number of issues being worked through. Thus, in summary, functional waves with horizontal expansion were implemented, following what Steve Wright called a called "broad not deep" approach.

4.6.3.1 CRM Siebel implementation at the North Harbour Location in Portsmouth

For illustration, we look at implementation at IBM.COM located in Portsmouth, North Harbour, UK. At IBM.COM, five business units came on board. PDT teams to action the implementation process and to train the users were formed. The first to come on board was IBM.COM also called the PDT1.

According to Donna McGeady (CRM deployment leader) IBM worked to a strict deadline of Jan 29th 2001 to go live, employing the ‘broad but not deep’ approach. The next European country to come on board was linked via parallel meetings. Process definition, mapping and transition across all processes was carried out. Appropriate team function workshops and documents to be actioned were created. Data migration work was a critical success factor to meet the project deadline. Data migration was important as the data needed to be moved from the existing legacy systems and over to the new system. A shadow database was created to map the data from the legacy systems before putting it on the new system.

In December 2000, territory assignment activities commenced to ensure that, on migration, all ‘Tele Coverage’ agents had the correct accounts and the opportunities on which they were working. Helpdesk training was set up, in-house experienced agents utilized and live helpdesk function set up to go live on cut-over date. During December – January 2000/2001, data testing activities across the transfer from old to new system were carried out. The data stored in the shadow data base was tested prior to moving it to the new system. IBM.COM (also known as PDT1) went live 29th of January 2001.

4.6.3.1.1 Project Management of CRM Implementation

Prior to making the decision to acquire the system, IBM invested in excess of three years in coming to a common set of well defined processes. These processes comprise the inputs, the outputs and the workflows of all of their key sales and support activities. They also include opportunity management, customer satisfaction, relationship management, and offering information.

In 1997 a support group had been developed to focus on five audiences: call centres.com; field sales, face-to-face sales, marketing and business partners:

'their task was to understand the job that each one of those audience groups did, how it was evolving and how Siebel would be deployed to them and in effect they were the source of the guidance on how we would configure Siebel to meet the needs of those users.' (Peter Cross, CRM Operations Manager)

IBM also formed a Siebel development group. These were the people who actually knew the Siebel product inside out, took the input from the audience leads, and translated that into specific configuration of Siebel to respond to individual user needs. However, according to Jane Walsh a pilot user/end-user at IBM.COM, she would have liked to see more end-user involvement. Relatedly, for Steve Wright, IBM underestimated the quality and the state of the legacy data. This complicated the data migration process.

A deployment team was made responsible for taking output from the Development Group and planning and executing deployment of Siebel releases/upgrades to their end users:

"They had the technical preparation, they had the end user communication and education and they had the actual physical cut-over management. That group really had two major sub-groups to it, one was the deployment planners and leaders, and these were the people that really focused on the planning, the development of the education, and development of communication." (Peter Cross)

This was the stage, according to Andrew Nunes and Jane Walsh (end-users), where end-users got involved in the implementation process in terms of getting a two and half day training
CRM Executive reported to a group called Investment Review Board:

"The two key players who remained constant throughout the life of the project was the Senior Executive responsible for sales and distribution in IBM and the Corporation CIO." (Peter Cross)

Over the three geographies IBM tried to replicate the above. At the geography level, in each one of the three IBM geographies, the America's, Europe and Asia Pacific, there was a mirror image of two of the three legs. They tried to replicate the audience focus and the deployment focus at the geography level. However, they did not duplicate the Development Group. The development was done once at a world wide level and the release/upgrade was then implemented commonly to all three geographies.

4.6.3.1.2 User/ stakeholder commitment

There was initial senior management support to spread an integrative culture through using CRM Siebel. Executive leadership was involved in this project full-time starting at a Vice Presidential level:

“This was a team charged with end-to-end responsibility... they were full time people with inclusion of all the geography teams and all the business units, dedicated full time for multi-year commitment to make this happen.” (Steve Wright)

This showed commitment at senior level. However, implementation was done through a relatively imposed approach. According to several respondents, ‘broad but not deep’ did not penetrate enough to expose local discrepancies and issues. Implementation teams did gather information to benchmark good working practice at IBM. Local stakeholder perceptions at senior and middle management level were taken into consideration. However, according to staff at Portsmouth for example, stakeholder involvement at the ground level came at a later stage. Moreover no external customer involvement was considered at any stage, which challenges the ‘broad but not deep’ approach:

“We did not use customers for any validation or walk-throughs or anything like that.” (Steve Wright)

Furthermore, the implementation was somewhat rushed. The issues with data migration were not taken into consideration: *“What we probably would have done in retrospect, if we were given a chance to re-do this, is extend our timetables a little bit. We had very aggressive plans.” (Steve Wright)*

Moreover, the quality of data was in a bad shape but this was not realized until the time of data migration. This data misfit created quality issues regarding the legacy data.

Stakeholder involvement at the floor level came at a later stage according to Jane Walsh, a 'super-user'. Super users at IBM.COM at North Harbour UK were selected by IBM.COM managers when Patrick Walsh from IBM USA came down to facilitate the implementation, six months after the signing of the Siebel contract.

In conclusion, user commitment may also have been affected by the lack of involvement in the decision making process in buying the systems. End-users were involved in the implementation process at a later stage. No external customer involvement was taken into consideration.

4.6.3.1.3 User Training and Experience

Super-users were trained first and then used as trainers for the rest of the end-users before the release date. The duration of the training program was three to four weeks, with two and a half days per user effectively. Training duration seems to have been rushed and once more the focus was on the 'broad but not deep' methodology. The short training duration led to an illusion of consensus between the parties (Gee, 1992). In our analysis, a false consensus existed between the trainers/super-users at IBM.COM, in which trainers assumed that end-users were more similar to themselves than actually was the case (Ross et al., 1977). A 'shared context for knowing' could not take place due to the lack of shared and 'mutual high-obligations' psychological contracts (Newell et al., 2002; Shore and Barksdale, 1998).

Training duration was very short and did not give enough time for users to understand and feel comfortable with the system (Bingi and Sharma, 1999). The trainer, Patrick Walsh from Atlanta spent too short a time at IBM.COM. Time constraints prevented full transfer of perceived benefits of the system from Patrick Walsh to super-users and from these to end-users (Pliskin et al., 1993). End-users

were put on a two and a half day course prior to the system going live. Moreover they had to learn the system to be able to retain their job security (Davenport et al., 1998).

4.6.3.1.4 Knowledge sharing Issues in the CRM Implementation

4.6.3.1.4.1 Knowledge silos were found both at vertical and horizontal axes

At the vertical level of hierarchy there is a management system called Signature Sales Leadership, which facilitates some knowledge sharing as it is used to gather data. A corrective action is taken during the weekly review whenever an out-of-bounds condition is identified. If there are pervasive issues that IBM find consistently occurring across all the geographies, or all the brands, those are brought up to a sales operations review at a world wide level and they review the process/design, or the tool capability and function, and at a global level. However, there is no system that captures, retains and exploits the tacit knowledge owned by the end-users.

“Within Siebel are some data points and reference capabilities and analytical functionality etc but quite honestly there is no vehicle within Siebel or CRM itself to capture tacit knowledge and then share that across other sales organizations.” (Steve Wright)

According to Lisa Nichols, (CRM Process Manager for IBM.COM), at a lower level of hierarchy CRM smart website is used. From this website the end-users and their managers can take part in the latest development of the CRM tool. This allows the end-users to take advantage of the prescriptive knowledge available in order to improve their work (Vincenti, 1993).

The adoption phase was rushed through. End-users did not get enough time to get to know the system well and were still locked in the old mindset with a familiar looking green screen (Jane Walsh, Donna McGeady). This led to the window of opportunity for adoption of the system starting to close and the system being adapted by the end-users (Orlikowski and Tyre, 1994). This was accompanied by negative talks in the toilets - people not being able to log on to the system which inhibited their

performance - annoyance being expressed openly as well, e.g. “Siebel’s down, I can’t log on, I’ve got three customers screaming at me, you’ve got to sort it out.” (Donna McGeady)

According to the above some free transfer of knowledge took place in informal settings (Kunda, 1991b). However, this transfer of knowledge was in the form of a negative spiral which may not have helped in motivating adoption of the new system.

Some people however, were faster than others in picking up the system. They were more IT literate and had a ‘can do’ attitude. The tricks of the trade, the short cuts, were and are getting born in the heads of the end-users. However, due to the competitive nature of the job those work-arounds or short cuts may rarely get transferred (Vincenti, 1984). “So it could be - but in an ideal world it shouldn’t be like that - we’re all fighting them, the competitors. We’re trying to win customers - we shouldn’t be fighting each other - it happens though” (Andrew Nunes). Elites possessing the knowledge find it hard to let it go and to share it openly with their colleagues (Davenport et al., 1998):

“Everyone is protecting their sheep, because they are their opportunities, and they are numbers so they will be counted.” (Andrew Nunes)

This exposes a subculture gap, where elites are on one side of the gap and may share the knowledge only among themselves. This can result in knowledge silos containing knowledge in the form of work-arounds and tricks of the trade which may remain embedded in certain groups or sub-cultures (Vincenti, 1984; Orlikowski and Tyre, 1994). This increases the dependence of non-elites on the elites (also called as ‘gurus’ by Donna McGeady at IBM.COM) and ‘gurus’ not only create job security for themselves but also increase the dependence of others on them (Salancik & Pfeffer, 1977). Some tacit knowledge may get transformed into an explicit form through the reciprocity of relationships by way of informal interaction (Krogh et al., 2000):

“Once a month we have a core and we talk mainly about the process side of things. But if one person is having something happen, then we’ll always check to see if it’s applicable in other countries. And I think it’s something that’s automatically happening - it’s just something that you’re not really aware of” (Lisa Nichols).

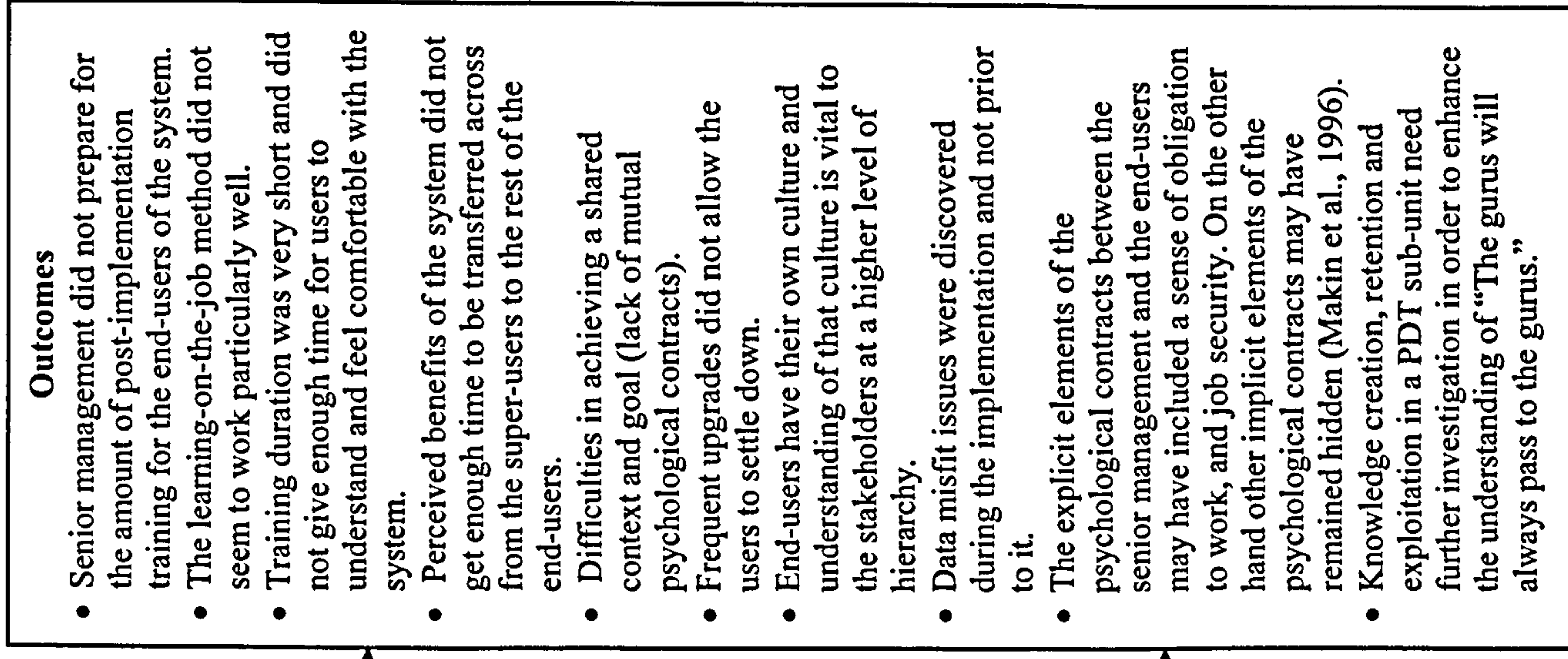
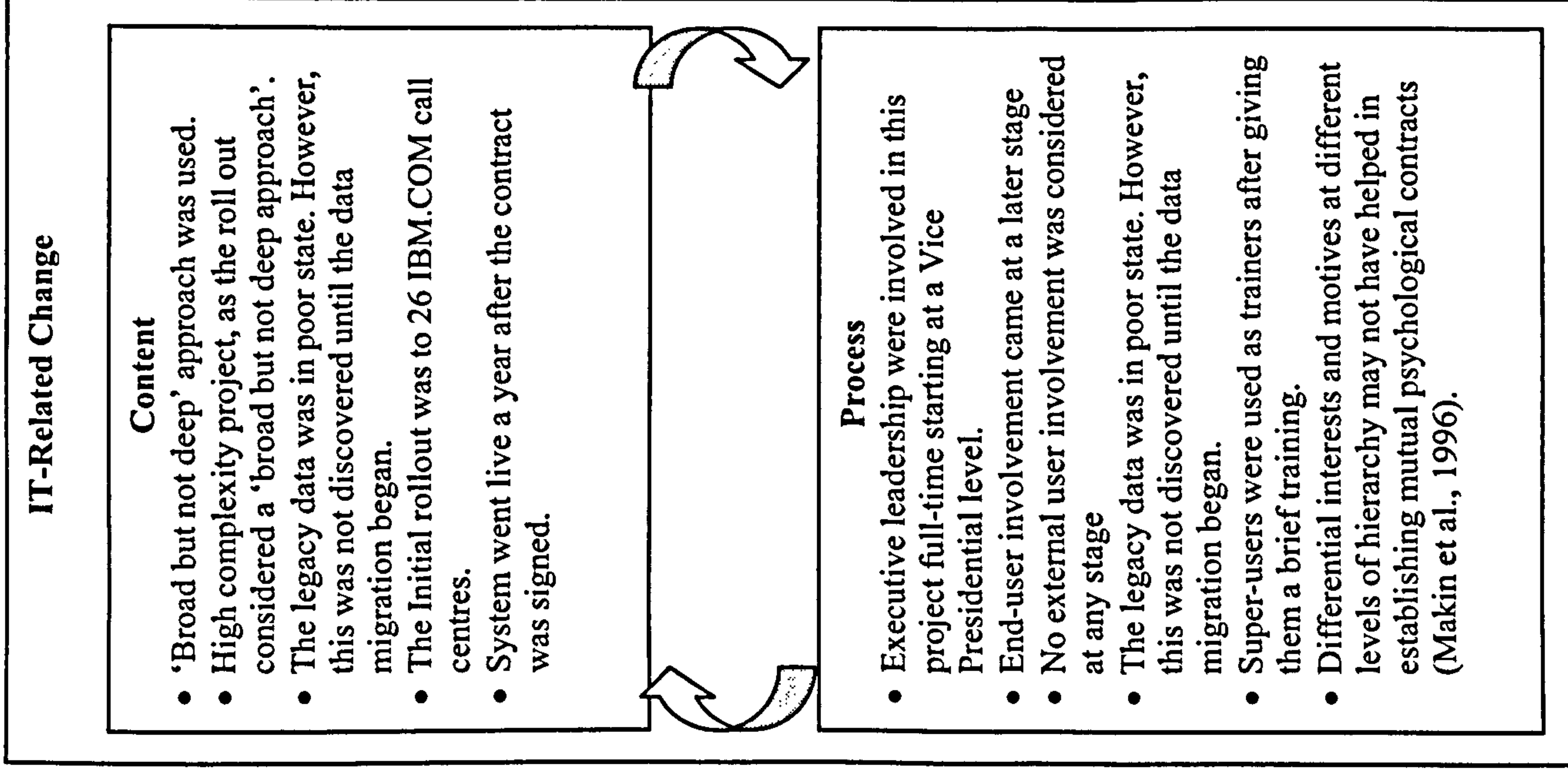
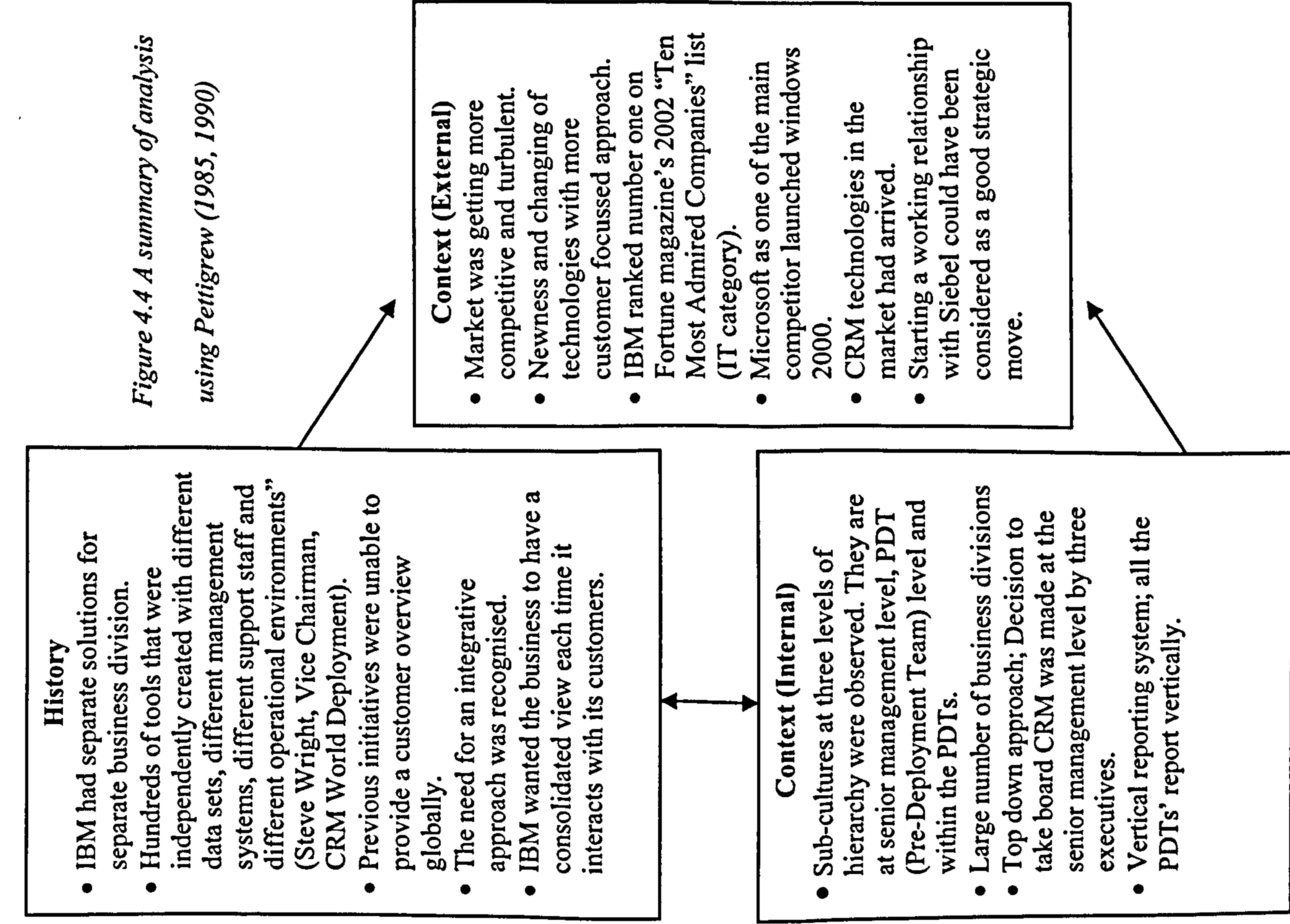
The above is done in a formal setting which may inhibit a free transfer of knowledge across the sub-cultures (Kunda, 1991b). Furthermore CRM Siebel was implemented in five PDTs (Pre Deployment Teams) at Portsmouth UK, but not concurrently. Consequently systems did not interlock with each other over a period of time. PDT5 (Database Marketing) came on board at a later stage. PDT1 (IBM.COM) had the new system up and running, whereas the PDT5 was still using the old system and this continued for about eighteen months. All the PDTs have their own set up and don’t interact with each other on a regular basis. They do however have a vertical reporting system and a help-desk that they share with other PDTs. The latter is linked further with a business unit called the Service Management and that in turn is linked with the Project Team EMEA (Europe, Middle East and Africa) and World Wide Factory. There is no horizontal interaction structure that would facilitate the transfer of any ‘prescriptive knowledge’ (Vincenti, 1993) across the PDTs (Sue Hunt, Service Management). However, the vertical reporting system may enable some knowledge sharing. Knowledge, in particular tacit knowledge, may still lie in vertical silos within the PDTs. Knowledge in such silos may become ‘sticky’ that is, residing in one area or silo and not easily moved to the other parts of the organization (Bartlett and Ghoshal, 1998).

PDT1, has further six subsections which went live at the same time. They are: GSMB (Global Small and Medium Businesses), Sectors, Software specialist, Business Partners, Tele sales (based in Dublin) and Web team. Problems within these subunits are reported via the help-desk to the Service Management. Service Management then works with the query and tries to resolve it. However end-users from IBM.COM at Portsmouth when talking to someone at helpdesk may end up explaining a local issue to an IT technician in a far away country. Alternatively they can contact the Operation Team or Focal Point, based locally, to facilitate a face-to-face interaction in which case the local

support will still have to contact the help-desk (Bennett and Gabriel, 1999). So there is no way of by passing a vertical reporting system. While end-users can seek help from the super-users via their team leaders (Alison Ogden, Mike Cope, IBM.COM) there is no guarantee that they will get help because 'gurus' may be reluctant to pass on their 'tricks of the trade'. The 'gurus' may have developed their own subculture which needs further investigation.

Furthermore CRM Siebel was implemented in five Pre Deployment Teams (PDTs). PDT5 (Database Marketing) came on board at a later stage. PDT1 had the new system up and running, whereas the PDT5 was still using the old system and this continued for about eighteen months without systems interlocking with each other. All the PDTs have their own set up and don't interact with each other on a regular basis. They do however have a vertical reporting system and a help-desk that they share with other PDTs. The help-desk is linked further with a business unit called the Service Management. Service Management is linked further with the Project Team EMEA (Europe, Middle East and Africa) and World Wide Factory. There is no horizontal interaction structure that would facilitate the transfer of any prescriptive knowledge across the PDTs (Sue Hunt, Service Management). However, the vertical reporting system may enable some knowledge sharing. Knowledge, in particular the tacit/non-codified knowledge may lie in vertical silos within the PDTs. This needs to be investigated further.

The knowledge creation, retention and exploitation within the above six sub-units at IBM.COM is worth investigating further. This will help to identify and understand the process of non-codified knowledge sharing across the various subsections within IBM.COM. For an overview of the initial analysis of the contemporary situation at IBM, see the diagram on the following page.



4.7 Conclusion of the Pilot

This Pilot set out to investigate the CRM implementation at both research sites, namely Birmingham City Council (BCC) and IBM. The chapter focused on CRM Frontline implementation at BCC and CRM Siebel implementation at IBM. Special focus was given to IBM.CM in UK at Portsmouth. Case research methods were applied as both the CRM applications are in a formative stage and experience of subjects and their perceptions thus becomes vital (Benbasat et al., 1987).

The Pilot was carried out to describe the key events and then discuss the ‘how’ and ‘why’ questions regarding those events in terms of an initial analysis. Theories, both from within the literature review and outside it, were applied to enhance the understanding of CRM systems and their implementation at both the sites.

4.7.1 Summary and Conclusion of the Analysis

This chapter set out to investigate the CRM implementation at both research sites, namely Birmingham City Council (BCC) and IBM. The chapter focused on CRM Frontline implementation at BCC and CRM Siebel implementation at IBM. Special focus was given to IBM.CM in UK at Portsmouth. Case research methods were applied as both the CRM applications are in a formative stage and experience of subjects and their perceptions thus becomes vital (Benbasat et al., 1987).

The chapter was structured to describe the key events and then discuss the ‘how’ and ‘why’ questions regarding those events in terms of an initial analysis. Theories, both from within the literature review and outside it, were applied to enhance the understanding of CRM systems and their implementation at both the sites. The framework adopted to explain the ‘Process’ (Pettigrew, 1985) by Willcocks and Margetts (1994) was used to highlight the key points raised in the initial analysis regarding the CRM systems at the both sites.

4.7.1.1 Management support

Management support at senior management level was provided for both the projects. The support thinned out as people at BCC started to leave. At IBM they had employed fulltime teams and committed resources to facilitate the implementation of CRM Siebel. However, they did not account for the poor state of the legacy data. Also the training seems to have been rushed at both sites. The initial motive behind bringing in the CRM system at BCC was to get the calls answered. At IBM they wanted to integrate the different business units. 'Broad but not deep' methodology deployed by IBM did not consider the expectations and the training needs of the end-users (Long and Fahey, 2000).

4.7.1.2 User commitment

User commitment was linked very much with imposed psychological contracts at the both sites (Rousseau, 1995). At BCC users have clearly found work-arounds in terms of using the manual methods to answer a call rather than using the CRM system itself. However, they do end up using the system to ensure the job requirement. At IBM the end-users have to use the system as there are no other options. At both the sites users haven't been able to see the shared benefits fully yet and hence the psychological contracts are not completely of 'mutual high-obligations' type (shore and Barksdale, 1998). At both sites user commitment has potential links with job security (Davenport et al., 1998).

A 'Mutual perspective taking' has not happened fully due to the competitive nature of the job at IBM and the secondee/ non-seconde relationship situation at BCC (Boland and Tenkasi, 1996). Furthermore, the content of an apparently mutual perspective may not have been allowed to surface or be challenged thus avoiding any interpretations which could shake up the illusion of consensus between stakeholders of the system (Prusak, 1998). This was the case at BCC. As the project progressed and the innermost feelings were exposed people started to leave the project. The achievement of a new definition of the situation in which all participants can share has yet to take place at its full capacity (Habermas, 1979).

User commitment may also have been affected by the lack of involvement in the decision making process in buying the systems. Decisions to buy the systems were taken at senior management level. End-users were involved in the implementation process at a later stage in both (BCC and IBM.COM) cases. No external user involvement was taken into consideration by either site.

4.7.1.3 User training and experience

Training at both the sites has been an issue. At BCC it was done without taking into account the BCC culture and its expectation. At IBM.COM the user training was very short and also lacked the understanding of the end-user culture. Super-users at IBM.COM trained the end-users without personally having sufficient experience to share the benefits to the end-users of CRM Siebel (Jane Walsh, Donna McGeady). Trainers may have experienced an illusion of consensus with the users of the system at IBM.COM. A false consensus effect may have existed between the trainers/super-users at IBM.COM, in which trainers assumed that end-users were more similar to themselves than actually was the case (Ross et al., 1977).

4.7.1.4 Project time

Both the systems went live a year after the contract was signed with the respective vendors. In BCC's case Lagan (manufacturer of CRM Frontline) also brought in Cavendish to help with the integration of the back-office systems. Subsequently BCC also outsourced their call centre management to Vertex. Consequences of outsourcing included some people resigning from the project and secondee / non-secondee relationship issues.

At IBM.COM data migration and training suffered due to the lack of time. Training time per user at IBM.COM was less compared to the training time at BCC. At IBM.COM only two and a half day's training was given before putting the end-users on the new system. Also, the IBM system got updated with various releases all the time, compared to BCC, where the only updates done were in the form of updated transcripts. The system at BCC has not undergone such changes as it has at IBM.COM.

4.7.1.5 Project team experience

The project team at BCC went through its ups and downs. The CRM program manager resigned soon after the new business manager's arrival. More people left, including the chief executive and the head of IT services as a result of a power struggle and conflicts (Jehn, 1995). Frequent changes of personnel may not have allowed the group to attain cohesiveness contributing to a less productive output (Kirkman and Shapiro, 1997). BCC re-aligned their strategy and moved back from a complete integration approach to having a call answering system with limited integration.

IBM had also committed fulltime teams working with the implementation. However, they underestimated the end-user training needs and consequently devoted insufficient time to training and education. They also struggled with data migration and did not take into consideration the poor state of legacy data in different business units.

4.7.1.6 Staff stability

Staff turnover at the floor level at both the sites was very high. This did not allow staff interactions to come to a state of mutual perspective-taking where shared learning can take place (Boland and Tenkasi (1996). The competitive nature of the work at IBM.COM made it even more difficult for any creative abrasion to take place and may not have enabled people to share their innermost feelings to improve the cohesiveness of the groups (Leonard-Barton, 1995). The staff at floor level may not have got the opportunity or have the time to get engaged in what other members are involved in. At IBM different PDTs rarely got the opportunity to sit down and share ideas on a regular basis to develop their common knowledge (Iansiti, 1993).

At BCC people from Contact Birmingham did not have many interactions with the back-office. The secondees felt left out at The Contact Centre. Furthermore their contract with BCC did not allow them to be upgraded to a team leader position (Abid Hayat, Contact Centre Birmingham). Non-secondees on the other hand could get promoted. Relationships at the contact centre between the secondees and the outsourced management were more power-based in style. This resulted in a scenario where BCC

seconded with a lot of experience and BCC cultural knowledge felt inferior to their non-seconded colleagues.

There was also a high turnover of staff at senior level at BCC. This did not help the project to get stabilised or the new staff to settle either. The resulting psychological contracts were more of an imposed than a 'mutual high-obligations' type (Shore and Barksdale, 1998). Creative abrasion that could facilitate the development of 'T-shaped skills' and sharing of 'tricks of the trade' rarely took place. Stakeholders at different level of hierarchy interacted with each other from within their silos and the transfer of knowledge could remain limited to the silos.

4.7.2 Knowledge sharing

4.7.2.1 Knowledge sharing and psychological contracts

Knowledge silos found at BCC were at different hierarchical levels. At senior management level the sub-cultural gap between Sarah Wood's team and Tony Glew's created a divide. The divide continued with David Hall getting replaced with a new business manager. Due to a lack of 'mutual perspective taking' and 'shared understanding' the psychological contracts were more imposed than 'mutual high-obligations' in type (Shore and Barksdale, 1998). This inhibited the process of developing positive creative abrasion, thus resulting in knowledge hoarding in the silos.

Due to a strong vertical reporting structure, which resulted in power based relationships at IBM.COM, knowledge hoarding occurred in vertical silos. In addition to this knowledge was not being transferred freely along horizontal axes (across the end-user business units) due to the competitive nature of the job.

This chapter suggests that psychological contracts play an important role in knowledge sharing. It also suggests that imposed psychological contracts (employee under obligation) tend to promote power

based relationships (shore and Barksdale, 1998). Explicit elements of psychological contracts between senior management and end-users include a sense of obligation to work, and job security. Importantly implicit elements of psychological contracts remain hidden (Makin et al., 1996) producing illusions of consensus, which influence and inhibit adoption and acceptance of the CRM system.

The micro mechanisms, for example psychological contracts, underlying the development of ‘mutual perspective’, ‘shared mental space’, ‘T-shaped skills’ and ‘knowing of what others know’ need further investigation in order to fully understand the elements that inhibit or facilitate the sharing of ‘tricks of the trade’ and work-arounds across the sub-cultures of a post CRM implementation environment. A further investigation of interdependencies between psychological contracts, sub-culture interactions and non-codified knowledge sharing can enhance our understanding regarding the knowledge sharing phenomenon in a CRM environment.

Both sites were at adaptation and acceptance stage where they were trying to develop the systems to promote the integration, and streamline the processes as much as possible. The impact of knowledge creation, retention and exploitation on the ongoing process of implementation is of high importance to both the organisations.

How knowledge, in particular tacit knowledge, is created, retained and exploited has not been fully addressed in this chapter. However, this chapter has potentially helped to expose areas that are worth exploring further: the tricks of the trade, the short cuts and work-arounds that are born in the heads of the end-users of the system, their hands-on skills, including best practices and special know-how (Vincenti, 1984; Polanyi, 1973; Orlikowski W.J. and Iacono S., 2001). In order to understand the above, one needs to understand the micro-elements (psychological contracts in our project) in the process of mutual perspective formation (Boland and Tenkasi, 1996) which facilitate tacit knowledge sharing. Scholars argue that tacit knowledge sharing is dependent on a creative abrasion type of environment where innermost feelings are revealed (Leonard-Barton, 1995). Furthermore it also

depends on the types of psychological contracts in that creative abrasion environment (Rousseau, 1995). On the whole the micro-elements that lead to 'mutual perspective taking' would need to be investigated further at both sites. This will help to understand how the 'tricks of the trade', the shortcuts, special know how, work-arounds, surface and transfer across the sub-cultures, individuals and groups.

4.8 Methodology Test

4.8.1 Methodological approach

The methods of gathering data included historical analysis, face-to-face semi- structured in-depth interviews, telephone interviews and observations. The recurring themes in the gathered data raised many 'how' and 'why' types of questions (Hyde, 2000). These were used as constructs in the initial analysis of the implementation processes at both sites. The pilot helped to test the methodology and its appropriateness regarding the continuation of this research.

4.8.2 Research design

The comparative longitudinal case study approach used fits well with this type of research as the focus of research is concerned with the effects and impact of the CRM system within the organisation rather than the technical aspects of the CRM system alone (Myers, 1997). Comparison of similarities and differences regarding the adaptation and acceptance at both sites enrich the analysis and create more depth in drawing theoretical conclusions (Yin, 1994; Darke et al., 1998; Pettigrew, 1997).

The 'managing in' of CRM systems, and indeed their subsequent management has thrown up some common problems for BCC and IBM (Willcocks, 1991). This means that the expected outcome of this study may reveal more similarities and fewer differences in CRM implementation in both organisations.

4.8.3 Data collection

Data in this pilot was also collected through observations at both sites (Birmingham City Council and IBM.COM). The use of observation as a method of data collection is well documented (Bell, 1992). This was achieved through attending the staff meetings both at IBM.COM and BCC. Furthermore, workshops were carried out at both sites to involve key stakeholders of the CRM systems. This helped to refine not only the literature review but also the research questions and the guidelines for the final set (fifteen at each site) of interviews (see Appendix 2).

Semi-structured in-depth interviews were constructed at both sites. The strengths of this method are that it is flexible and can be used to address quite focussed questions about aspects of organisational processes such as a specific decision making process (King, 1994). Interviews helped to probe the stakeholders of the system at both sites and were a useful tool with which to gather differing perceptions. The majority of the interviews were carried out on a face to face basis using an interview guideline. The face-to- face method gave an opportunity to gather the information through observing the characteristics of the interviewees during the interviews. The interview guide (Appendix 1) used helped to keep the focus on the key aspects of the literature review. It included a number of topics: introduction regarding the role of the respondent, implementation process, key events with dates, stakeholder perceptions regarding the key events, knowledge creation, retention and its exploitation.

The interview questions were open in order to allow the respondents to develop their perspectives rather than constrained by the perceptions of the researcher. Probing was used as a means of stimulating the flow of discussion where necessary. Interviews were audio taped and notes were taken by the interviewer. The note taking helped to gather information on what happened during the interview and clarified the researcher's understanding of what was being said.

4.8.4 Data analysis

Having transcribed the recorded interviews, manual colour coding was done and data was organised under recurring themes. This facilitated searching, marking up, linking and reorganising of data in a short period of time (Denzin and Lincoln, 2000). The recurring themes were used as constructs in the initial analysis of the implementation at both sites.

The variety of methods chosen created a useful form of triangulation (Yin, 1994). The data from key stake holders was then compared to find the similarities and dissimilarities between the cases using cross-case analysis. However, at this stage special attention was given to within-case analysis to enhance understanding of the implementation process of the CRM systems at both sites. The initial analysis provided a good base to probe further, with a special focus on non-codified knowledge sharing across the various sub-cultures at both sites. Continuous contacts with both companies were made to establish a good working relationship. Relationships at different levels of hierarchies at both the sites helped the researcher to gain further insight into the contemporary situation at both sites.

4.9 Summary of the refined literature review

The initial literature review was revised and developed in parallel to the initial data analysis. Five research literatures relevant to this study were brought together to provide a lens for analysing our selected case history. These studies covered IT implementation, organizational cultures and sub-cultures, knowledge and its sharing, psychological contracts, and Customer Relationship Management (CRM) systems.

4.9.1 Refined literature review: summary

The literature review has focussed on how aspects of culture, psychological contracts and knowledge management can critically affect the implementation process of an IT system within an organisation. Themes of stakeholder perceptions, psychological contracts knowledge sharing and subculture interactions have emerged. Our review has aimed to integrate disparate literatures in order to provide a

set of lenses and concepts to further study the introduction of a CRM system. Our overview of this integration is shown in Figure 4.5.

In the general literature, there is a consensus over the importance of understanding the implementation process. Over the years, many attempts to explore different elements of the implementation process have been made. However, the links between stakeholders' perceptions (based on the differential interests, expectations and power) and non-codified knowledge sharing in the implementation process of a new technology have not been explored in depth. This research attempts to investigate the above mentioned knowledge sharing process by linking it with the 'R' of the CRM implementation. The focus is narrowed down to the enablers and inhibitors to non-codified knowledge sharing in connection with a roll out of a new CRM system. There is a gap in the literature regarding the linkage between the existing implementation theories at micro level and CRM systems.

While investigating the above gap in our reviewed literature, we find a consensus over the importance of understanding the implementation process at a macro level. Over the years several attempts to explore different elements of the implementation process have been made. The existing implementation studies, including Rogers' (1995) stages of relative advantage, compatibility, complexity, trialability & observability and Kwon and Zmud's stage model (1987) adaptation, acceptance, routinisation and infusion, and Ross (2003) discuss the implementation process of an IT system at a macro level. This study fills the literature gap by investigating the micro elements such as psychological contracts and their impact on knowledge sharing across the key sub-cultures in a CRM environment.

Our review also revealed a consensus that informal settings can aid/facilitate the sharing of knowledge across sub-cultures, but much still needs to be investigated over how to attain the 'knowing of what others know', 'shared context for knowing', and 'mutual perspective taking'. As recorded earlier, some scholars argue that psychological contracts play an important role in the outcome of an interaction between individuals, though no link has been established between non-codified knowledge

sharing and psychological contracts. While different scholars talk about ‘knowing of what others know’, ‘mutual perspective taking’, ‘shared mental space’ and ‘T-shaped skills’, as aids to tacit knowledge sharing, they do not address the micro-elements that lead to these tacit/ non-codified knowledge sharing aids. This research aims to fill this knowledge gap by investigating the micro-elements, in this case the types of psychological contracts. In particular the study will investigate psychological contracts that lead to a ‘mutual perspective taking’ and ‘shared mental space’, enabling tacit knowledge to be shared in an explicit form across key sub-cultures. It will also investigate the resulting affects on the adoption and acceptance of a CRM system.

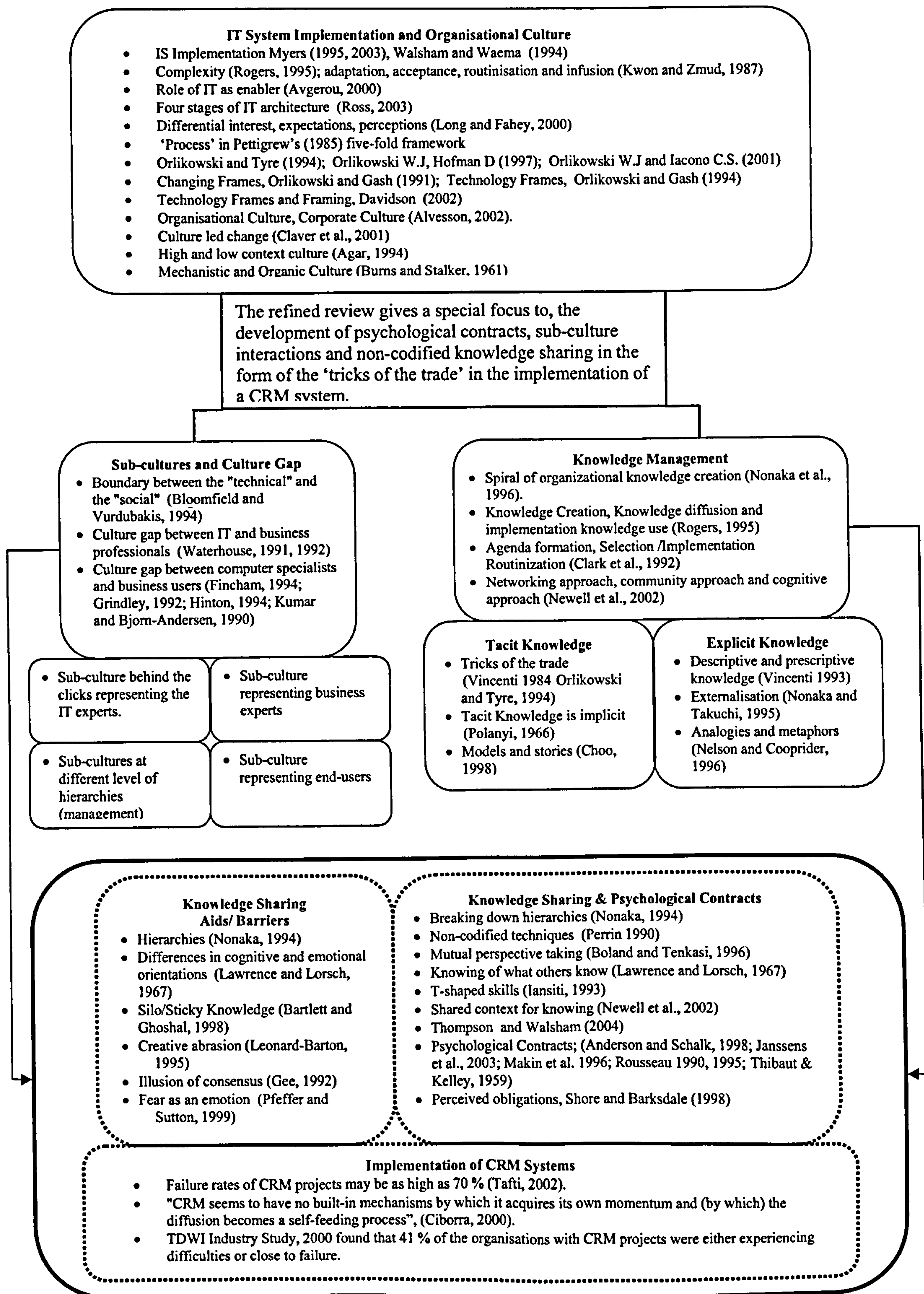


Figure 4.5 Summary of refined literature review showing identified sub-cultures

4.10 Refined research questions

Both research sites are at adaptation and acceptance stage where they are trying to develop the systems to promote the system integration, and streamline the processes as much as possible. The impact of knowledge creation, retention and exploitation on the ongoing process of implementation is of high importance to both the organisations.

How knowledge, in particular tacit knowledge, is created, retained and exploited has not been fully addressed in this chapter. However, this chapter has potentially helped to expose areas that are worth exploring further: the ‘tricks of the trade’, the short cuts and work-arounds that are born in the heads of the end-users of the system, their hands-on skills, including best practices and special know-how (Vincenti, 1984; Polanyi, 1973; Orlikowski, W.J. and Iacono S., 2001). In order to understand the above, one needs to understand the micro-elements (psychological contracts in our project) in the process of ‘mutual perspective’ formation (Boland and Tenkasi, 1996) which facilitate tacit knowledge sharing. Scholars argue that tacit knowledge sharing is dependent on a creative abrasion type of environment where innermost feelings are revealed (Leonard-Barton, 1995). Furthermore, it also depends on the types of psychological contracts in that creative abrasion environment. On the whole the micro-elements (the psychological contracts in this research) that lead to ‘mutual perspective taking’ would need to be investigated further at both sites. This will help to understand how the ‘tricks of the trade’, the shortcuts, work-arounds surface and get shared across the sub-cultures, individuals and groups.

The refined questions as a result of the pilot are as follows:

- a. How do the tricks of trade, special know how, the shortcuts, the work-arounds surface and get shared across the various sub-cultures during the adaptation phase of a CRM system, and with what effect?**
- b. How are the psychological contracts linked with various types of knowledge sharings and sub-cultures and why?**

Each case in the final analysis (chapters 5 and 6) is divided into two parts, namely Part 1 and Part 2. Part 1 goes through the interpretive narrative describing the course of events during a certain period of time at each research site. Part 2 is the analytic part and discusses the course of events, linking them to relevant theories from the literature review. A ‘within-case analysis’ is carried out using the refined framework as a result of the pilot chapter and the theories discussed in the literature review. Moreover, a cross analysis is carried out to compare the similarities and dissimilarities across the cases in order to obtain an improved understanding of the rich picture.

The framework adopted from Pettigrew’s (1985, 1990) six categories model contributed to developing a deeper insight into the contemporary situations and understanding the phenomena at both research sites. This framework in its improvised form as detailed in Figure 4.6 was used further in the final analysis due to its appropriateness to this research. The resulting salient features from the Pilot were used as a lens to focus on knowledge sharing issues linked with psychological contracts for final data analysis. These features have their links with the literature review (Pettigrew, 1985; Willcocks and Margetts, 1994; Davidson, 2002; Orlikowski and Gash, 1991, 1994). Some of the salient features were also picked up during the initial analysis and to answer our research question their significance cannot be denied. We discuss these salient features in detail below.

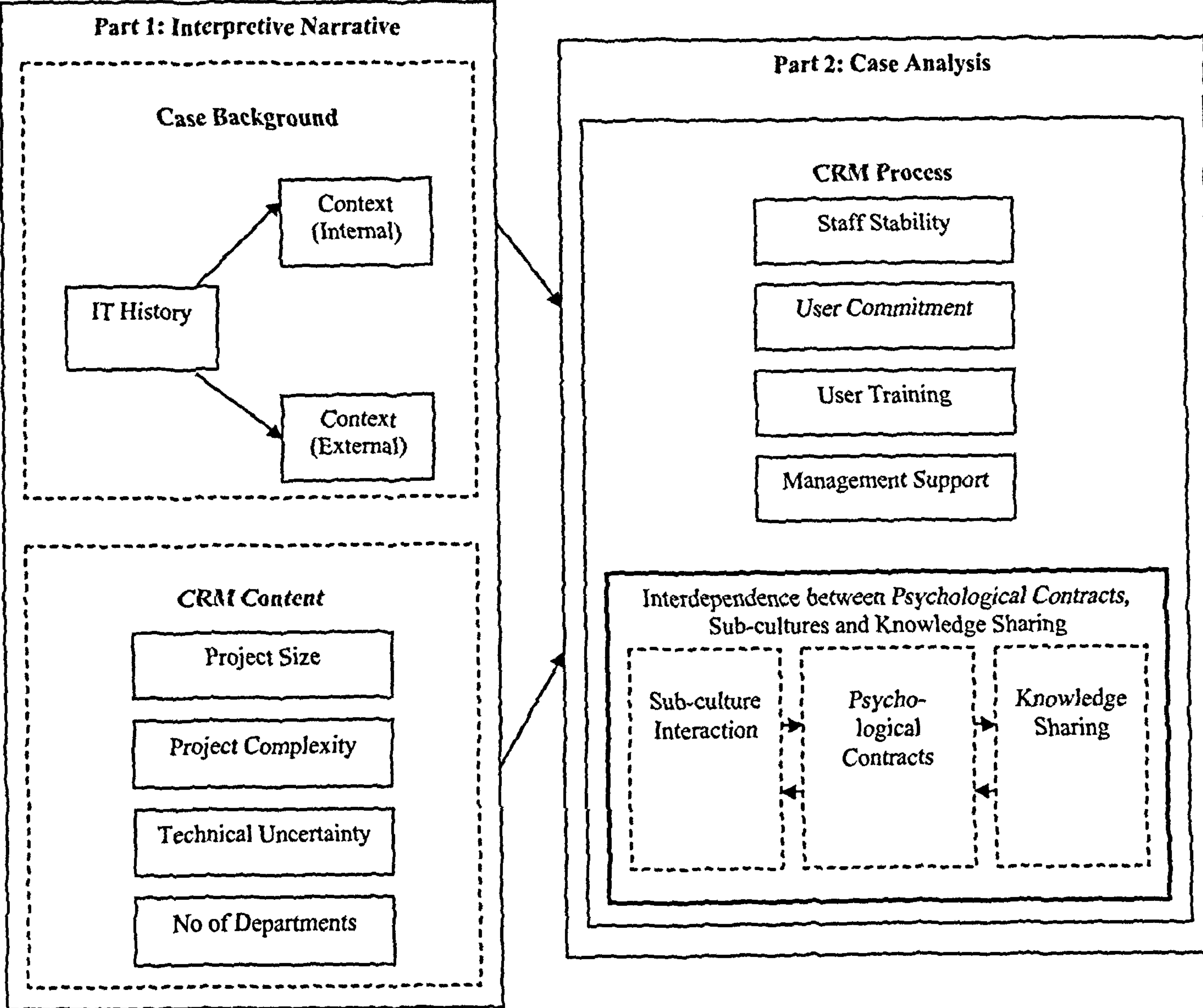


Figure4.6 Framework for the final data collection and analyses

4.10.1 Part 1- Interpretive narrative

4.10.1.1 Company Background

IT History: IT history/background of the research sites

Internal Context: IS infrastructure and management; how much is outsourced and why?

External Context: Market competition, government policies and supplier availability

4.10.1.2 Content of the CRM Project:

Project Size: Whether it was a Big Bang (radical) approach or a step by step expansion (incremental).

Project Complexity: Scale and complexity of project tasks, for example data migration.

Technical Uncertainty: Understanding of business processes by the technical team. To what extent was the system integrated with existing business process.

Number of Departments: Whether the user involvement had a narrow or broad base.

4.10.2 Part 2 -Case Analyses

4.10.2.1 Process:

Staff stability: staff retention issues; rewarding systems in place.

User/Stakeholder commitment: how the user/stakeholder commitment has changed over time.

User training: how is current user training being managed and have any training issues arisen from training?

Management support: whether the support has increased after the implementation or decreased and with what effect.

Knowledge sharing: what type of knowledge and how is it being shared, what is inhibiting/facilitating knowledge sharing?

Sub-culture interaction: interaction between the end-users and management, between IT experts and business experts, and between the subgroups within the end-user groups.

The above mentioned salient features were used for final data gathering purposes using refined interview guidelines (see Appendix 2) across the following key sub-cultures identified in our initial analysis of the research sites:

1. Sub-cultures at senior management level
2. Sub-cultures at middle management level
3. Sub-cultures at the floor level that are end-users
4. Subculture represented by the IT experts here referred to as ‘the culture behind the clicks’
5. Subculture represented by the business experts

4.10.2.2 Psychological Contracts and their interdependencies with subculture interactions and non-codified knowledge sharing

Types of Psychological Contracts linked with interactions across and within identified sub-cultures:

What types of interactions, prolonged/limited, are taking place?

What types of Psychological Contracts are linked with respective knowledge sharings and why?

Stakeholders from each subculture were interviewed again as part of our processual analysis throughout year 2004 to see if their perceptions regarding the system had changed over time (Pettigrew, 1997). The information regarding their interaction was gathered through observations during team meetings, staff meetings and in-depth interviews. The types of psychological contracts identified, were matched with their respective interaction across and within the key sub-cultures. A rich picture eventually emerges showing the details of linkages, of psychological contracts with stakeholder interactions, and their impact on knowledge sharing. This helps us to understand which types of psychological contracts are linked with their respective knowledge sharings and why.

In the following chapters five and six we present the second cycle of this longitudinal study. After having described history and context in an interpretive narrative we discuss and critically analyse socio economic issues from a knowledge management perspective. We also present our analyses regarding psychological contracts and their interdependencies on subculture interactions and non-codified knowledge sharing.

Chapter Five

Discussion and analyses BCC

5.0 Case Study: Birmingham City Council (BCC)

5.1 Introduction

This section presents the chronological description for the period 1999-2004 with a thematic account of Birmingham City Council’s (BCC) initiative to deploy a CRM Solution to promote system integration. It uses the previously stated framework in figure 4.6 to go into detail and initially discusses the history, context and content (Part 1). Moreover it uses the ‘Process’ part of the framework to carry out a within-case analysis of the implementation and post implementation environment at BCC (Part 2). The section closes with a summary at the end of analysis.

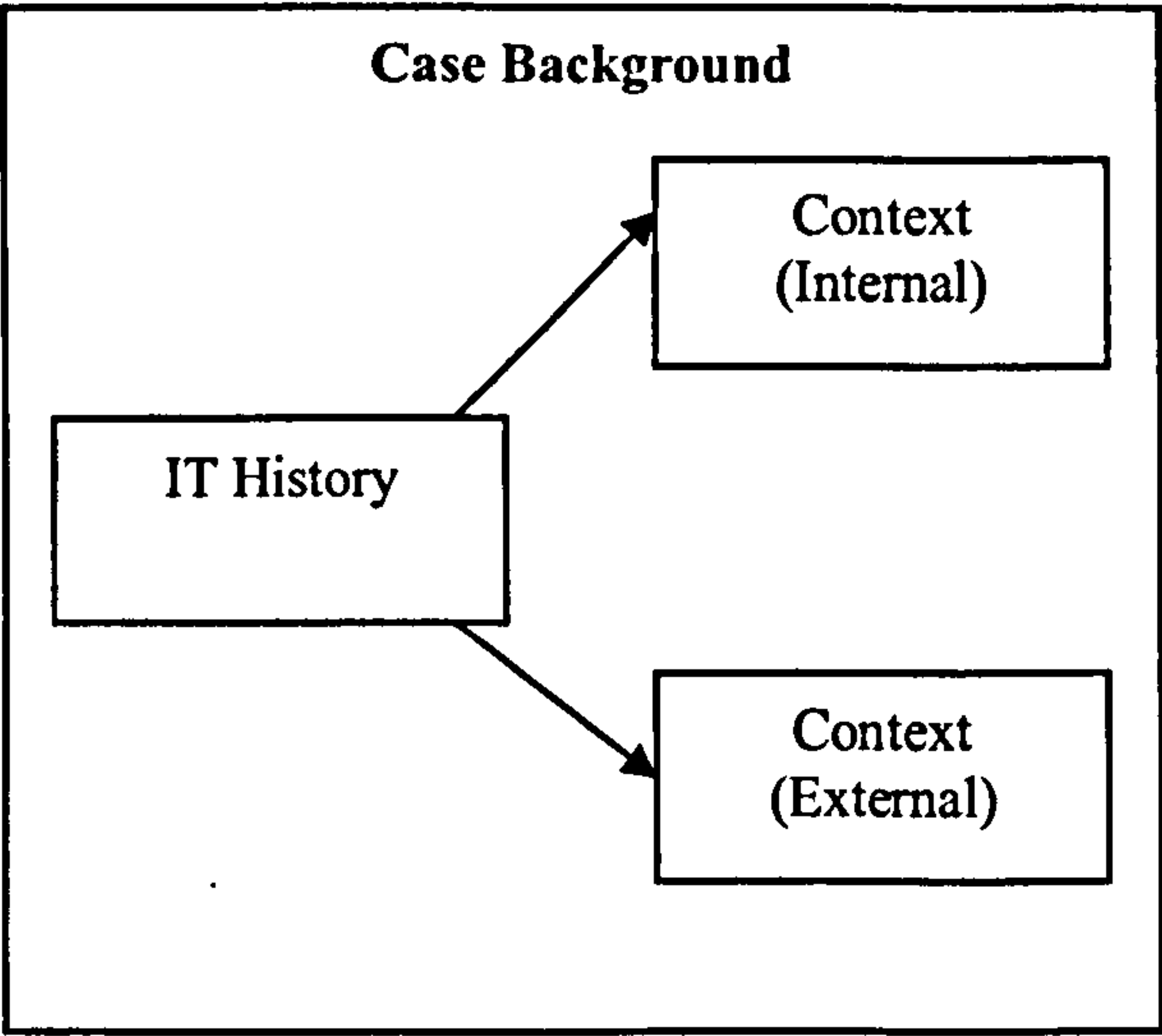


Figure 5.1 IT Background at BCC, including internal and external context

5.2 Part 1 – Interpretive narrative

5.2.1 Case Background (IT History, Internal and External Contexts)

In this section, we describe briefly the history and internal context for IT at BCC. According to Pettigrew (1997), *“The past is alive in the present and may shape the emerging future.”*

Birmingham City Council is the largest local authority in the UK. The City of Birmingham has evolved from being the UK’s cultural capital (1997) to one of Europe’s premiere conference and

public events cities. It is a lively, prosperous and cosmopolitan city, offering a rich mix of culture, history, shopping, community life and the arts, comprising 11 parliamentary constituencies, 40 electoral wards and more than one million people. At the heart of this vibrant community is Birmingham City Council (BCC).

5.2.1.1 Outsourcing of IT

Around 1994 senior management made a decision to move away from a centralised IT structure, increasing autonomy over buying and outsourcing of IT services by departments. As a result, the role of central IT became more of a support function. Tricia Thrupp (CRM Project Manager) at BCC IT Services states:

“If you think about the timing of that - that was at the time that PCs were really taking off and departments realized that they could afford to go out and just buy PCs. They didn’t have to come to the centre and have a mainframe solution, or whatever, so over a number of years PCs started to proliferate - little IT groups grew in departments - and then there was very much a decision, a culture decision within the organisation, to allow departments a lot of freedom so that central control went.”

This statement provides a good example and explains one of the common reasons for outsourcing IT. According to Willcocks and Margetts (1994) the newness and attractiveness (convenience/pricing) of technology led many public sector organisations, including BCC, to expose themselves to consultancy and supplier markets.

The following enlarges on the impact of the external context on the internal context, affecting BCC’s IT strategic planning (Pettigrew, 1997).

According to Tricia Thrupp, CRM Project Manager, each department at BCC over the years has become increasingly autonomous in terms of its IT:

“Departments would go out for solutions to meet their needs so an Environmental Services solution ... a Social Services solution without really any thought for strategy or the centre - and certainly my group, or the group that I worked in at that point, was just focussed on assisting them to buy a solution - and it didn’t have to fit into any standards really (very few standards) so we are left with this legacy of having everything under the sun out there - there’s Unix, there’s Vax machines, there’s Microsoft servers, anything you can think of is out there, Sun machine, all sorts of things are out there.”

Our respondent goes on to express her frustration:

“We’ve got very few truly corporate solutions. We’ve got a finance system and we’ve got an HR system, beyond that, because we’ve got lots of different businesses and we’ve tried to look at SAP for example. But it always needs so much tweaking when it gets out into the departments that it’s always cheaper to go and buy an off-the-shelf Propriety Leisure System /Propriety Environmental Services system / Propriety Museum System.”

According to this CRM Project Manager ‘vanilla’ applications seemed to be popular in BCC as they required less in-house expertise, a general trend also found elsewhere (Parr and Shanks, 2000; Willcocks and Sykes, 2000). Tony Glew, Head of BCC IT up to October 2001, justified outsourcing in this way:

“When I was here I was the Head of IT and I had a staff of about 70 or 80 IT staff, but the IT staff were business analysts and system analysts and they weren’t programmers. There were one or two people who were experts in Lotus Notes, but we didn’t have programmers like COBOL programmers or anything like that. The programming assignments had all been outsourced to IT NET in 1989.”

In-house implementation and development expertise during that period was limited. In particular, it lacked programmers. IT expertise was in the form of business or system analysts. BCC had no

programmers or any really technical people on-site. According to Tony Glew, when they chose new packages they really had to be good, and not require a lot of technical skill to make them work. Thus BCC lacked a balanced mix of technical and business expertise, something seen as an inhibitor in previous implementation studies (see for example, Parr and Shanks, 2000). As a result, the role of the IT centre was diverted into supporting departments which would go out to buy solutions to meet their individual needs.

Various applications developed without consideration of a strategy for integration.

In Tricia Thrupp's words:

"This resulted in separate solutions for environmental services and social services respectively, without any thought for strategy."

Tricia Thrupp saw system integration as a particularly difficult task:

"Everything's a balancing act, isn't it? But that's the situation we've inherited and that's why today (2004) when you say, 'Try to join things up.' Why are we so keen on trying to get an integration strategy together that enables us to do that? Because it isn't simply a case of saying! Well we've got four or five core systems, we've got hundreds of systems out there, hundreds and hundreds that do all sorts of different things in different ways."

Thus it would seem that IT solutions were bought in by different departments with little regard for cross departmental integration resulting in similar technology bottlenecks as recorded by Holland and Ben (1999) in their study of ERP systems implementation. According to our respondents, the pattern of outsourcing the programming to IT NET and buying of hundreds of solutions continued for many years.

BCC has realized over the last few years that it is not efficient as an organisation and a lot of things that have been done on the re-organisation of IT since 1999 have been about trying to re-establish standards, though not without difficulties:

“But you can only go so far, with our re-organisation. I’d have loved to have said, ‘Right! All IT staff are now centralised.’ But that’s going too far because the departments have (are used to) their autonomy and won’t release.” (Tricia Thrupp)

The literature suggests that sub-cultures formed as a result of the above IT autonomy may have different interests, expectations and power (Long and Fahey, 2000). As the departments acquired their own systems, the knowledge created did not get shared across the departmental sub-cultures due to the lack of system integration. A further investigation (later in this chapter) of these sub-cultures in different departments will assist in understanding knowledge sharing mechanisms.

5.2.1.2 Impact of Political Directives in the ‘Outer Context’

It is important to understand the larger political context and its impact for a UK city council like Birmingham. According to the Office of the Deputy Prime Minister (2000), Birmingham City Council (BCC) has been given the task of ensuring that all the services were available to the citizens through electronic means by 2005. This government directive potentially is intended to promote continuous improvement of local government services to the public. The government has stated its commitment to promoting continuous improvement in local government services through Electronic Service Delivery (ESD), to achieve the target of 100% ESD capability by 2005 (Office of the Deputy Prime Minister, 2000). Furthermore, this vision intends to modernise the way public sector delivers policies, programmes and services to its customers/citizens. The above illustrates the government deadlines and speed of new legislation that Willcocks and Margetts (1994) talk about as pressure factors, pushing the organisations towards consultant and supplier markets.

The purpose of IEG (Interactive Electronic Government) is to build local government services around the needs of customer/citizens rather than the organisational structures of service providers, giving its customers a 'one-stop-service'. All levels of government have been encouraged to make full use of the potential for electronic service delivery to improve the responsiveness and quality of services. This potentially will result in different parts of the public sector working together seamlessly to deliver services more effectively and efficiently. This is where the IEG directive links with the idea of a CRM system, as proponents of CRM systems claim to facilitate a one-stop-shop for customers. New technology should not replace personal contact but it should make it better supported (Office of the Deputy Prime Minister, 2002). The Government's agenda, according to the office of Deputy Prime Minister, has been driven by social expectations - such as people's expectations to be able to deal with organisations by many different means, not just traditional face-to-face contact. The Hewson Group (2002) concluded from their research that society is now 24x7, non-stop, faster paced and full of opportunities to travel or experience a wider range of pursuits, and an essential part of this turn-of-the-century culture in western democracies has been an expectation of higher standards of customer service. As a result of these raised expectations, and explicit in central and local government exhortations, is the demand that public services need to exploit new technology to meet rising customer expectations successfully in the same way as the private sector if they are to avoid being accused of delivering poor quality services.

Julie Bullen, Corporate Customer Relations Manager:

"Birmingham City Council is committed to improving services and fostering closer relationships between the Council and the Public. Evidence from recent annual customer opinion surveys conducted by MORI and customer feedback suggested that the Council has significant problems in responding to telephone calls. For a number of reasons, an unacceptably large number of calls (30%) fail, either because the caller can't get through or doesn't get to the right person who could act on it. This leads to confusion as to whom customers should contact, difficulty in finding numbers, being passed from department to department and the provision of inaccurate and out-of-date information."

The above shows one of the main reasons that led to the implementation of a CRM system and a Corporate Contact Centre. However, various stakeholders had differing views and motives, resulting in sub-cultures. We will discuss them in detail below.

5.2.1.3 The Internal Context at BCC

In this section the sub-cultures and subculture-gaps at BCC are discussed, using theories from the literature review (Louis, 1985; Fincham, 1994; Grindley, 1992; Hinton 1994; Kumar and Bjorn-Andersen, 1990).

Several sub-cultures were identified during the initial analyses at BCC:

1. Sub-cultures at senior management level
2. Sub-cultures at Middle management Level
3. Sub-cultures at the floor level that are end-users (these will be discussed at a later stage while analysing the 'Process' part of our analytic framework in this chapter)
4. Subculture represented by the IT experts here referred to as 'the culture behind the clicks'
5. Subculture represented by the business experts

We will now discuss them in detail. The CRM project was originally perceived to have an IT-led approach. The revised approach after Tony Glew left in October 2001 was perceived as business led. According to James Druary (Contract Manager, Corporate Customer Relations), one group of people (led by Tony Glew, Head of IT) had a positive attitude towards CRM implementation with an integrative approach, while the other group (led by Sarah Wood, Strategic Director of Resources) had a less integrative, more 'call-answering' focus. This gave rise to two sub-cultures at the senior management level:

"As a result of that, the priority has gone into that area rather than developing CRM, collecting a lot of data about customers, using that data to shape services in the future. That's the area that's still weak at the moment (mid 2004)." (James Druary)

This points to a cultural gap between the social and technical (Bloomfield and Vurdubaki, 1994), that is, in this context, between the human resource department, service agents, end users, and some managers on the one hand, and on the other the programmers, IT technicians, developers and systems analysts. The public was not getting through unproblematically over the phone, and that had caused great concern within BCC. This triggered politicians to look for ways forward. The IT-led group which included, Tony Glew, David Hall and the consultant Bill Newman were concerned about establishing a strong link between the front- and back-offices using middleware to integrate the system, as we have seen in other systems implementations (Holland and Ben, 1999; Louis, 1985). Initially, the middleware design proved insufficiently effective, and this slowed down the process of implementation. Hence, a non-integrative approach, under Sarah Wood, supported by Julie Bullen and other like-minded people, was taken on board as a better alternative. The problematic nature of the differing cultures, one stemming from an IT background (Tony Glew) and the other from a financial background (Sarah Wood) created a further hurdle with some serious consequences in the form of people leaving the project, thus slowing down implementation progress – an issue with parallels in other implementations (Bloomfield and Vurdubaki, 1994; Price Waterhouse, 1991, 1992).

Each IT unit in BCC had developed increasing autonomy over the 1990s into 2004. Furthermore, a culture decision within the organisation to give departments more IT freedom took away the central control and weakened the influence of corporate culture on the departments. This on the other hand strengthened the departmental sub-cultures (sub-cultures at middle management level). By 2004 every department had different solutions, as it always seemed cheaper to go and buy off-the-shelf systems for self-use. But problems arose when different departments wanted to communicate with each other without the necessary system integration. This situation was not helped by the fact that departments had gathered knowledge over the years that some found hard to release without seeing any clear benefits. As Davenport et al. (1998) argue, individuals sitting with certain knowledge may have fear of losing their power or position by releasing their knowledge completely.

At BCC, according to David Hall:

“This type of knowledge hoarding has given rise to vertical silos in BCC at a departmental level.”
(David Hall, CRM Programme Manger)

According to Leonard-Barton and Kraus (1985), making the knowledge residing in such vertical silos mobile across departments is an important facilitator of implementation. Such knowledge possessed by the departments can be in explicit or implicit state, both codified and non-codified (Perrin, 1990). In other words, it can be in descriptive, prescriptive or tacit form (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995). It becomes vital to investigate the elements that facilitate the sharing of knowledge residing in various forms across the departmental sub-cultures at BCC.

5.2.1.4 Moving Towards CRM

Central Government in the UK has legislated that 100% of all public interactions with local government bodies must be made available by electronic means by April 2005 (Office of the Deputy Prime Minister, 2000). The British public has, despite assertions to the contrary, enjoyed two decades of rising standards of service in virtually every walk of commercial life (Hewson Group, 2002). In order to meet these expectations public services are increasingly looking towards implementing Customer Relationship Management (CRM) systems.

By late 1998 BCC was concerned about their public call-answering capacity. According to David Hall, CRM Programme Manager, an internal evaluation done by BCC showed that less than 10 percent of people could get through on their first call to BCC. BCC had been looking at establishing a corporate contact centre for a number of years:

“Various consultants were brought in for short periods about the idea, but it had never really got off the ground. It was being looked after by the Transportation Department. They were looking at an initiative called ‘Street Scene’ where they would have contact from the public regarding all issues

affecting the streets, and they felt that that would form the basis from which other contacts from the public could be established.” (David Hall)

According to Tony Glew:

“70,000 phone calls were received in a day; I think we answered about 1,000 (some fantastically bad figure). There’s all sorts of reasons for it, not bad people, but very bad organisation, management, things like that. It was Dave (David Hall) that really got things going well.”

According to David Hall:

“Head of IT, Tony Glew, was keen to get something off the ground and felt that no other department could really pursue the initiative because they had gone as far as they could. Tony Glew suggested that central IT pick up the baton and try and run with it as a corporate initiative, not just based on ‘Street Scene’ but generally, in other wider areas in relation to corporate issues involving contact with the public.”

As a result, BCC started looking at establishing a corporate contact centre. According to several respondents, one of the key requirements identified was the need to set up some form of corporate access database. By doing so, they could record and monitor the contacts and “that would be an important component of any contact centre that was established - and that’s when we started looking at CRM as an issue” (Tony Glew). The above statement describes the BCC rationale for a CRM solution. They intended to use a CRM system to improve the call-answering service to their customers.

According to David Hall, Chief Executive, Sir Michael Lyons, at the time was well aware of the protracted dialogue that had taken place: *‘It was one of these initiatives that had just been kicked around.’* He further argued that it had never really had a project champion, so when Tony Glew suggested that Central IT take up the initiative his suggestion was enthusiastically endorsed by the chief executive. David Hall further suggested that the chief executive was most keen to improve the

communications with the public and felt that everything was too diverse and too spread over the Authority.

5.2.1.5 CRM vision starts to move towards reality

There needed to be a greater focus on receiving communication from the public:

“The Chief Executive, Sir Michael Lyons, saw a very good working call centre in Brisbane and suggested having one in Birmingham once he got back.” (David Hall)

The above indicates that the project had a project sponsor in the form of the Chief Executive, one of the strong recommendations coming out of parallel research on IT project implementation (see for example Goodhue et al., 2002, Willcocks and Sykes, 2000). From thereon the CRM project started to take shape and develop. Several key events took place before the system went live. A description of key events during the implementation may help to enhance the understanding regarding the implementation process of CRM system at BCC.

Tony Glew started to work with the idea of a CRM system as a solution to the BCC call answering problem:

“There’s another key character, who is still working here called Gerry McMullen. Gerry is brilliant. Gerry sees things, brings them all together and if you ask the right questions, out it all comes into a strategic whole. It was Gerry that told me, ‘This is what’s it’s really about, Tony, not just answering the phone but connecting the agents to the back-office systems and logging everything in the middle.’ That was critical and Gerry and I talked about it all the time. Gerry got it spot on and it was really important. So immediately we started developing the idea for a government computing conference.”

The first big presentation on CRM was in 1999 to a government computing conference and on that occasion Tony Glew had expressed the idea of every authority in the country having its own CRM but

all linked together through the Internet, so any citizen anywhere could actually link into the CRM. Tony's idea was received positively. The Deputy Leader of the BCC (Andy Howell) was interested in promoting modern techniques. He got Tony Glew and Sarah Wood (Strategic Director of Resources) together and gave them the go-ahead regarding a CRM project. At this stage, according to several respondents, Sarah Wood was more concerned about answering the calls more effectively than anything else. Significantly Tony and Sarah held different and potentially conflicting underlying views that did not surface until a later stage of the CRM project, an issue that appeared also in research by Pliskin et al. (1993).

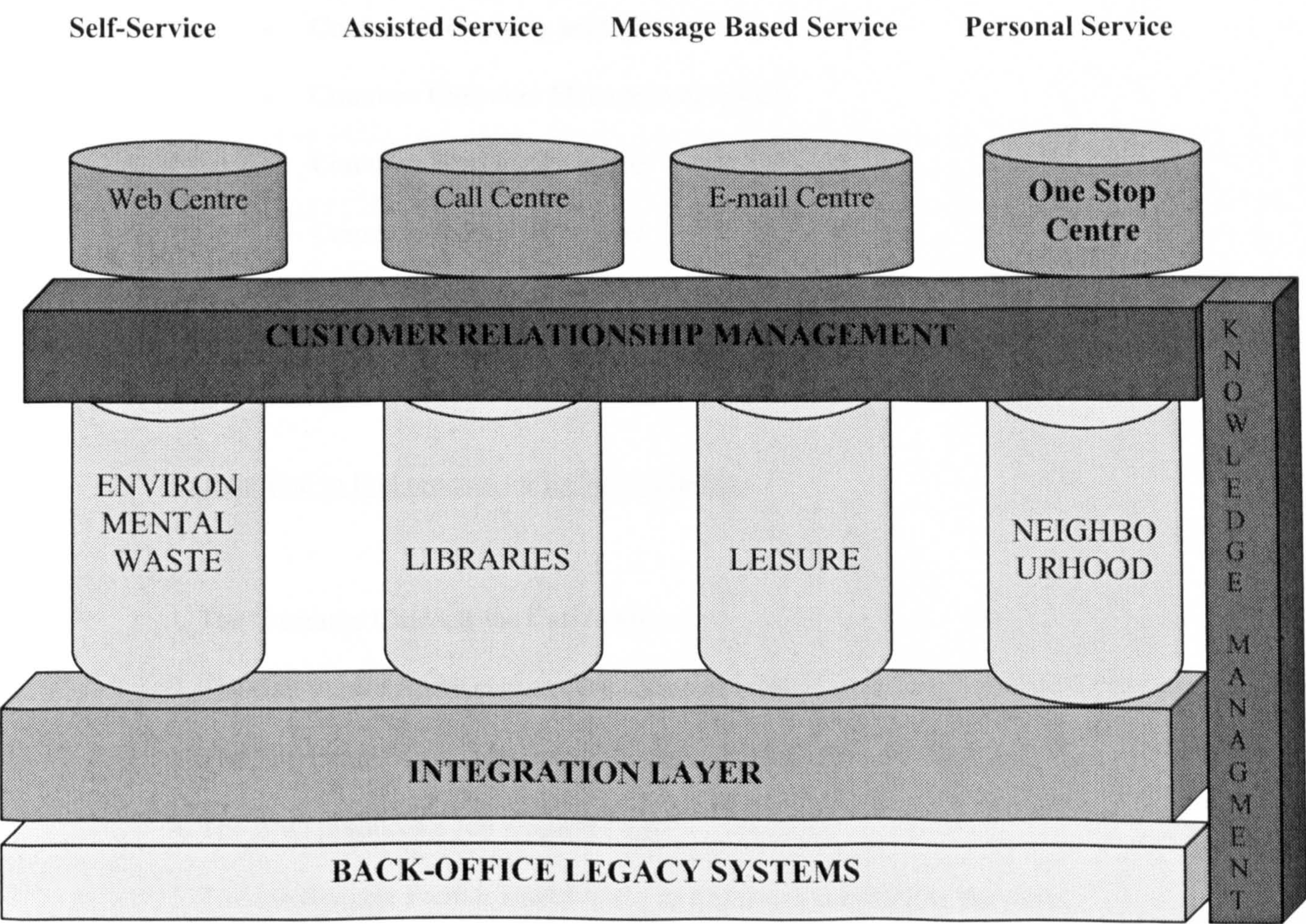
Wathne et al. (1996) argue that factors such as accuracy, timelines, adequacy and credibility of interactions influence perceptions of honesty and openness, and are essential to achieving more frequent and relevant knowledge sharing between the partners. According to several studies, a creative abrasion – here between Sarah Wood and Tony Glew - at an early stage of a project, in this instance the CRM FrontLine project, could have helped to create a 'shared context for knowing', leading to a mutual perspective. This could have facilitated knowledge sharing between the two and even across the sub-cultures (Newell et al., 2002; Boland Tenkasi, 1996).

According to Krogh, Ichijo, and Nonaka, (2000), effective knowledge creation depends on the physical, virtual and emotional context of an organisation. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. Relationships between Tony Glew and Sarah Wood were not felt to be reciprocal. This resulted in lack of trust from both sides. Their psychological contracts were low on trust and loyalty, resulting from conflicting ideas, motives and interests. A mutual perspective towards CRM FrontLine was absent (Boland and Tenkasi, 1996).

5.2.1.6 Preparation for a CRM solution

According to the 'Managed Service Business Case Draft' prepared by David Hall and Gerry McMullen in 1999, CRM would be at the core in enabling the management of the citizens'

relationship and ensuring a consistency of approach across the customer facing operations within the Authority. The delivery of the CRM solution would underpin all these initiatives and provide a single view of the citizen shared across all access points. The draft further states that the fundamental requirement within the Customer Service environment would be the ability of the Service Provision to integrate seamlessly with the back-office systems and facilitate a single presentation of customer data to the operators. This would ensure both improved efficiency as well as end-to-end accountability for the customer transaction. This requirement is regarded in the Business Case Draft as one of the principal criteria for the selection of the CRM solution.



Source: (Managed Service Business Case Draft)

Figure 5.2 Proposed Technical Infrastructure regarding CRM at Birmingham City Council (1999)

The Report from the Head of IT to Chief Officers' Group was delivered on 1st December 1999. According to this, as shown in figure 5.2, the provision of a CRM system would provide a common

view of the customer shared across the distribution channels, utilising a common database. There would be a requirement for the operators of the one-stop-shops and Contact Centre to utilise the CRM system. The creation of the CRM solution needed to embrace the changing communication methods that would emerge over the next 3 years – for example, according to the document, based on Forrester research (2000), e-mail handling capability was set to form 15% of total transactions, Interactive TV would play a key role, as well as the traditional channels (Source: Managed Service Business Case Draft). Furthermore, according to Tony Glew, key drivers for the new initiative needed to establish corporate standards for:

- Common Database
- Common Telephony architecture
- Common Customer Management system
- Common Working Processes
- Common Working Practices
- Multi Channel Accessibility

For example:

Current End to End process for Refuse collection

1. The Customer Contacts the Call Centre
2. The Call Centre Agent captures the Customers data
3. The Call Centre Agent transmits a Request to the DSO
4. The DSO produces a Job Request Form
5. The Job Request Form is issued to the Refuse crew to complete the work
6. The Refuse crew completes the work
7. The completed Job Request Form is returned to the DSO
8. The DSO log the completed Job Request Form details back onto the System

Suggested revised End to End process for Refuse collection

1. The Customer Contacts the Call Centre
2. The Call Centre Agent captures the Customers data
3. The Call Centre Agent transmits a Request to the Refuse Crew (via System 2)
4. The Refuse crew completes the work
5. The Refuse crew log completed job direct onto System 2

Source: (Managed Service Business Case Draft)

In the above suggested process the provision of a single customer management system would ensure consistency of contact and information flow across the authority.

5.2.1.7 Outsourcing of Implementation – the out sourcing trend continues

According to Tony Glew, primarily BCC felt that it needed someone who had the right implementation experience. Consultant Bill Newman, who had a good track record, was employed from May 2000. However, much of his experience was from the private sector which differs from the public sector in several distinctive ways (Willcocks and Harrow, 1992). Together with Bill Newman, three more consultants were hired.

One of these consultants was John Harlow, who had a background in work study for over 20 years in the public sector. He also had experience in call centres and script design. He was hired to do business process re-engineering in terms of process analysis in relation to the targeted areas for a contact centre. Peter McMahon and Derek Forland were the other two consultants. Their initial role was to investigate neighbourhood offices and council tax. Bill Newman's role was to manage the consultants and also to act as an advisor to Tony Glew.

The hired consultants lacked specific knowledge of BCC culture and its operations. This necessitated their working closely with BCC if they were to acquire that type of knowledge and share their own knowledge in order to facilitate knowledge sharing in both directions.

From May 2000 onwards BCC went through a process of putting requirements together with a view to going out to tender. There were also some presentations from suppliers. Fourteen were invited, of whom five replied. Lagan was chosen. The criterion against which Lagan was selected was best value, expressed as a 70/30 split, 70% functional, 30% cost for the procurement. Lagan won on all counts and Sarah Wood agreed to contract with Lagan, even though they were a small company. BCC took Lagan on board together with their partner, Cavendish, as part of the strategy. Birmingham had only 39 systems-facing people, so the idea was, in Glew's words, that:

"We'd better get in bed with somebody who's very good at doing integration, because we aren't."

BCC entered into contract negotiations with Lagan, the provider of software called FrontLine. BCC also went on a site visit to Sussex Police in Brighton during October/November 2000 to observe their gazetteer using a CRM application. In December 2000, the decision to sign with Lagan was made, the contract being finalised in March 2001. Keeping in view the limited programming expertise in BCC, an off-the-shelf package was chosen. It could be configured and implemented fairly quickly. There were also possibilities for back-office integration through an in-built XML facility in the package. However, these capabilities were not exploited due to the lack of in house IT expertise. Outsourcing was carried out without any prolonged discussion with the departments. This led to creating of under-obligation types of psychological contracts between the partners. The impact of these weak psychological contracts on knowledge sharing is discussed under the 'Process' part of our framework at a later stage in this chapter.

5.2.2 CRM Project Content

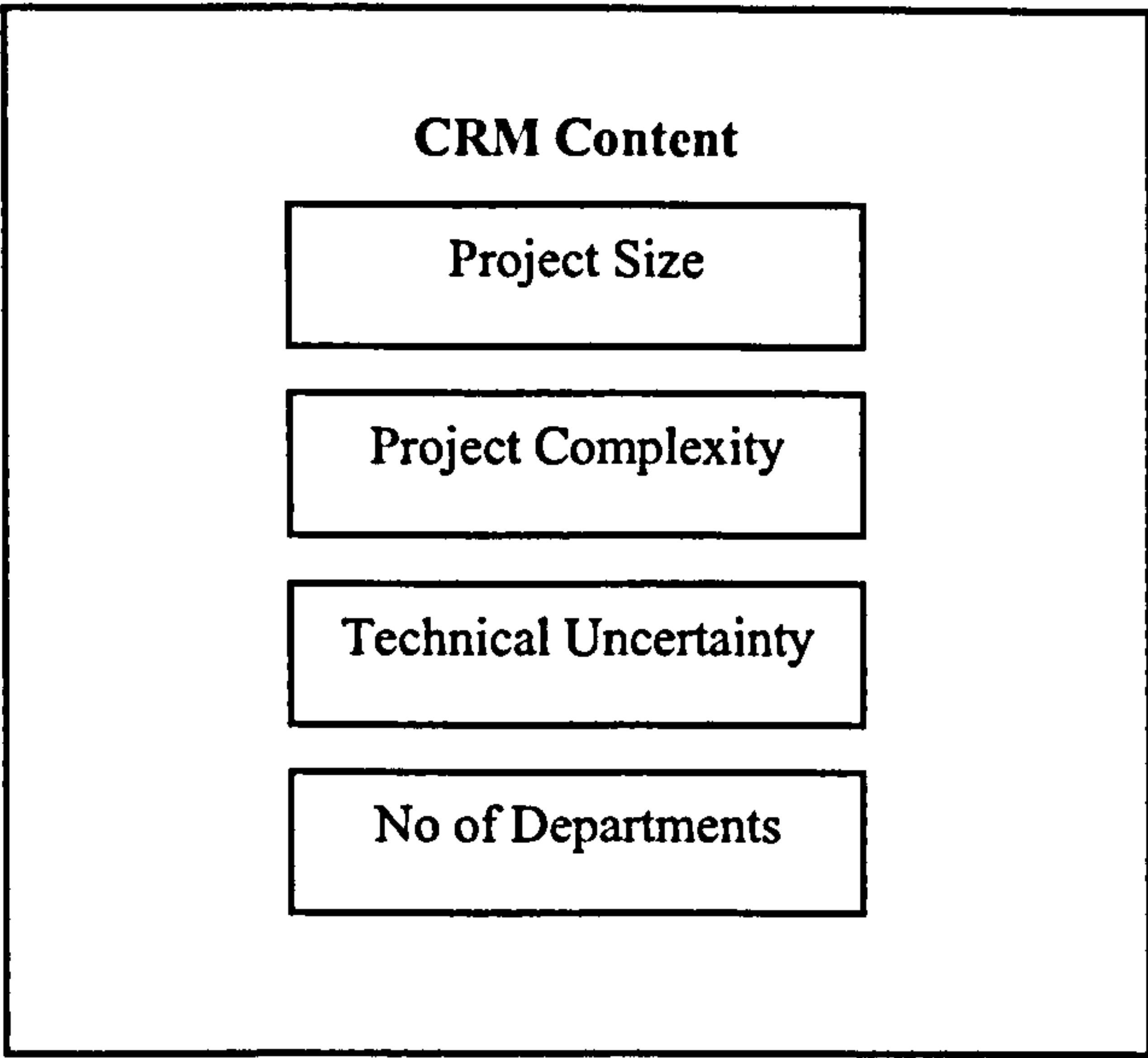


Figure 5.3 *Content of the CRM Project at BCC*

5.2.2.1 Project size

5.2.2.1.1 *The system goes live: developments from March 2002*

The system went live in March 2002. This included the Corporate Contact Centre managed by Vertex, using the FrontLine solution/software, providing services for Environmental Waste, Neighbourhood Advice and Council Tax. Prior to that, from about July/August 2001, a pilot of the CRM system with Environmental Services was done, which was one of the first service areas that went live. However, the system tested without physically having a contact centre in place. It was done in the existing office. The product was used to see how it interacted with BCC’s back-end system and what values it generated and problems it caused. There were some major issues with that pilot, centred on the technical side in getting it to talk correctly with the back-end system. One issue was that Environmental Services at that point were in the process of renewing their back-end system. Difficulties with the pilot indicate that, against Leonard-Barton and Kraus (1985) a clear purpose, well defined and communicated, was missing.

The pilot test did not involve collective testing. Each department did its own tests independently with the system. This did not enable any close interaction between the different departments. Hence, the opportunity for any prolonged creative abrasion to take place, as recommended by Newell et al. (2002), was not there. Different departments also had weak, under-obligation types of psychological contracts with the Corporate Customer Relations, who were the driving force for CRM FrontLine. This was a result of limited stakeholder involvement in the CRM Project. Departments felt left out. As many respondents reported to us, these weak psychological contracts – as a result of limited interactions in both horizontal and vertical directions – undoubtedly inhibited the free flow of knowledge from one department to another and from departments to Corporate Customer Relations. A sense of shared benefits which could have helped in the mobility of knowledge silos and hoarding was missing at the departmental level.

Just as seriously, there was no external customer involvement in the process of implementation of FrontLine. In fact BCC had tried it before and it had not worked. According to Bob Carter:

“It was much better to take something to the citizens, get it changed and validated, rather than giving them a blank piece of paper and saying, ‘This is what we are going to do. How do you want to do it?’”

Birmingham City Council started small and involved only three departments to start with. They were as follows:

- Environmental Services
- Neighbourhood Advice
- Council Tax

According to Tricia Thrupp:

“To start with, five BCC services were supposed to go on board with FrontLine. This got reduced to three. It was very much a political directive as to which went in and which did not. BCC did an awful lot of work with Leisure, and then all of a sudden they dropped Leisure because Revenues became more important, so they just had to dump all the Leisure work.”

BCC Contact Centre first went live March 2002. Three main services, Revenues (which included Council Tax), Neighbourhood Advice (which are general enquiries) and Environmental Waste for domestic customers (which also includes abandoned car vehicles) were included from the start. During the year 2003 the Benefits Service front-end also went in, so telephone enquiries for Benefits then went into the Contact Centre. At the very end of 2003 in December, two relatively small services, Recruitment and Home Works went on board. Later in April 2004 Anti Social Behaviour and finally in July 2004 the Leadership Line came on board as well.

5.2.2.1.2 Department of Benefits

When benefit enquiries come in, the agents will access two or three main City Council systems. There is a script flow process, but the script flow will only take them through certain types of enquiry, to actually answer the detail on the enquiry they need to access the mainframe systems that hold the key information. According to Adrian Stafford Corporate Customer Relations:

“It’s either guidance, ‘Can I claim? How would I claim? What are the rules about claiming?’ – or it’s detailed enquiries about existing claims, or it might be – ‘I applied two weeks ago, what’s happened to my claim? Where is it in the process? How close am I to getting it sorted or what is holding it up?’ And within the mainframe system are certain codes and information about where it is in that process and the agent would then use that information and explain to the customer, ‘Right at the moment we’re awaiting a reply from your Landlord about your proof of rent’ – or whatever it may be.”

Benefits advisors do not tend to use FrontLine CRM system as they use two back-office systems called Multi Benefit Assessment System (MBAS) and Document Management System (DMS). Both are 14 year old mainframe systems also called 'Green Screens' by the users.

5.2.2.1.3 Department of Recruitment

If a member of the public wants to apply for a job within the City Council then they phone the Contact Centre. It only deals with the initial information regarding a job advert. It can merely send a job application upon the caller's request or clarify any simple detail surrounding the advert.

The Contact Centre having taken the initial call, furnishes the application and then informs the City Council's Human Resources system that the form has gone out. Moreover, if that form then comes back in, it will come back in at the Central Department, the back-office. It will not come back to the Contact Centre.

5.2.2.1.4 Home Works

Home works involve members of the property owning public being able to get information from the City Council regarding assistance in funding the upgrading/repairing of their own property. They are given advice on how they can borrow money to carry out repairs and maintenance. The service is predominantly a referral service.

Adrian Stafford further states that:

"Home Works/House Proud will advertise on buses throughout the City. Please get in touch if you want to do up your house and you may qualify, because there's some qualification criteria for these services."

The advisor at the Contact Centre only deals with the initial qualification, which involves asking questions regarding the caller's personal information after which the advisor will refer the case to the

back-office. Adrian Stafford admits that it is mainly a one-directional process. Information travels only from front-office to back-office. No knowledge sharing occurs in the opposite direction. The back-office after receiving the initial assessment then gets in touch with the customer, or potential customer, and furnishes them with guidance on how to proceed. It deals with the case from there on.

5.2.2.1.5 Anti -Social Behaviour Line

According to Adrian Stafford the anti-social behaviour line is:

“The position with Anti-Social Behaviour is there’s a Central Government initiative for Authorities to be more reactive to anti-social problems.”

The Anti-Social Behaviour Line basically receives complaints and offers guidance. A member of the public may phone in with a particular anti-social problem and the agents will then guide them in terms of their rights and possible procedures.

Our respondent explains the above with the following example:

“For example, they might not be happy with some activities going on and it might be that under the current legislation there’s not a lot else that can be done. So kids playing football somewhere, they might deem it anti-social but legally it’s not so anti-social. So they will be given what information they can.”

5.2.2.1.6 Leadership Line

The leadership line according to Adrian Stafford is:

“The Leadership Line is a telephonic line that has its own unique number that the Deputy Leader, or the Leader for that matter, of the City Council, if they want to go on a radio station and publish or promote a certain campaign and they say, I want to know the public’s feeling about it, then that’s the

number they'll probably give out. And what happens with those enquiries is, those enquires are then fed back to the Deputy Leader's office, via e-mail, so it might be a particular campaign that the Deputy Leader or the Leader wants to promote and says to the..... might go on the radio, for example, and say, I want to know people's concerns about, I don't know, illegal car clamping, that was one of the issues."

The Call Centre then takes the calls and feeds the data into the Deputy Leader's office via e-mail.

FrontLine CRM System is used scarcely, if at all. Moreover the whole process, of taking calls and referrals to the back-office, is a one way reporting system. There is no two way communication between the Front and the back-office apart from in the case of Environmental Services. However, the back-office at the Environmental Services is not satisfied with the service provided by the front-office customer service advisors, also known as agents. According to Richard Budden:

"FrontLine System at the moment I've seen absolutely no benefit from. It's not really been of that much interest to me. My focus has been on trying to get the businesses used right, so we're not spending money unnecessarily. My understanding is that there is a mass of data sat in FrontLine in relation to who's been contacting the City and details of callers are recorded, but I've no idea still what use that information is being put to, or even how I can access it. So to all intents and purposes FrontLine itself is being of very little use to me as a business representative. In terms of the Contact Centre, Contact Birmingham, running itself – big advantage – and the big advantage we've had is that calls are answered, whereas before it wasn't resourced to handle all the enquiries that were coming in, so we've solved that problem. What I'm not sure about, and will take some convincing, is the quality of what is said when the person (caller) gets through to them, or the quality of the data that is recorded to enable the business to do its job."

The above statement shows that knowledge sharing is in one direction only. The information loop is kept open and does not get a chance to be completed. Lack of trust regarding the quality of Front-

Office service using FrontLine CRM appears to be an issue between the Environmental Department and the front-office. Reciprocity in the relationships is missing. This gives rise to a 'mutual low-obligation' type of psychological contract with a lack of shared mental space or shared understanding (Krogh et al., 2000; Shore and Barksdale, 1998; Newell et al., 2002). The lack of shared understanding may have resulted from a lack of prolonged social interaction between the groups (Gray et al., 1985; Isabella 1990; Newell et al., 2002) as creative abrasion did not take place due to a lack of prolonged interaction between the Environmental Department and the front-office (Contact Centre managed by Vertex). Knowledge sharing in the above case was limited due to the lack of prolonged social interaction which could have provided opportunities for creative abrasion resulting in 'mutual high-obligations' types of psychological contracts. This is also argued by Gregory (1983), Riley (1983) Pettigrew (1979), Schein (1985) and Strauss (1978) who further suggest that people tend to share assumptions, knowledge, and expectations with others with whom they have close working relationships.

Although the size of the project initially was fairly small, the geographic separation between front-office and back-office increased the distance between the two. This resulted in limited face to face interaction. The lack of in-house IT expertise at BCC further added to the difficulties in aligning business processes with system integration. Not only was there an unbalanced mix between IT and business expertise but also a lack of prolonged in-depth interaction and creative abrasion between the Front and back-offices (Parr and Shanks, 2000; Newell et al., 2002; Leonard-Barton, 1995). Such abrasion as took place was of a predominantly negative form resulting in mistrust. Poor communication not only created problems between Front and back-offices but also in other areas such as between secondees and non-secondees.

5.2.2.2 Project Complexity

The nature of the CRM project at BCC became more complex due to differing individual interpretations of the objectives. Sarah Wood did not want to waste time in discussing the complexities

of system integration and was pressurised by the fact that customers were not getting through to the Council. Tony Glew, David Hall and Ian Patterson were in favour of a robust solution which would have taken more time.

Sarah Wood was primarily concerned about the high costs and time constraints and wanted the project to be launched as quickly as possible. Delay in understanding the system requirements was caused by a lack of marriage between Business Processes and IT Capabilities.

The Business and IT sub-cultures in the above did not share a mutual perspective (Boland Tenkasi, 1996). Success depends not only on how effectively diverse individuals are able to organise and develop their unique knowledge competencies, but also how they can integrate and utilize their distinctive knowledge synergistically (Nonaka, 1994). Such synergy can be obtained if barriers to knowledge sharing across the key sub-cultures are understood. It requires a process of mutual “perspective taking” where distinctive individual knowledge is exchanged, evaluated and integrated with that of the others in the organisation Boland and Tenkasi (1996).

The fact that each department had outsourced their system to different vendors did not help matters. A complete System Integration was clearly going to be time consuming and time was something Sarah Wood was running short of.

In social psychology the above discussed phenomenon has been studied in the prisoner's dilemma game, in which the highest outcomes for both participants can be achieved if both co-operate, but a high proportion of participants tend to make selfish choices that lead to lower outcomes for both (Thibaut & Kelley, 1959). Due to time constraints and lack of a mutual perspective between Sarah Wood and Tony Glew, a decision made by Sarah did not take into account the system integration argument put forth by Tony Glew, David Hall and Ian Paterson. This resulted in increased project complexity and technical uncertainty which we will discuss further under the following heading.

5.2.2.3 Technical Uncertainty

Lack of a good mix between IT and Business expertise increased technical uncertainty (Parr and Shanks, 2000).

According to Richard Budden:

“The IT Section at, on the Client side, Adrian Stafford and Tim Charge and whatever, haven’t really got a grasp of business, yet they are responsible for specifying changes to a system.”

Due to departmental outsourcing, a vast amount of data got stored in several different systems without any communication links across them. Integration of these legacy based systems to CRM FrontLine turned out to be a difficult task. Data migration has suffered as the data has remained stored in the mainframe legacy systems in the back-offices.

As Ian Paterson puts it:

“In Birmingham what we have is – we have quite a few different back-end systems, because effectively for an organisation as vast as Birmingham and with the the business diversity, because that’s one of the big differences between Local Authorities and private sector – is that if you go into one of our Departments and you’ll find five, six, seven different, completely different diverse business functions that are all multi-million pound businesses in their own right, which means that we don’t have any ERP solution that will meet all our requirements, there isn’t one. So what you get is you get a series of departmental solutions and what Local Government has been bad at over the years and we’re now trying to resurrect, is you do get silos, so you get silos of information and departmental solutions. So none of our solutions are customer based, they’re all of Unix servers, different Unix servers, with different package solutions because there isn’t one that you can go off and buy and say, we’ll have that for the enterprise. So it is a big difficult integration problem to get into the back-end systems.”

Although there was an inbuilt integration capability (XML) in the FrontLine system, according to Tim Charge (IT programmer), Lagan the manufacturer of FrontLine didn't have enough knowledge to exploit XML integration, to establish a link between the FrontLine and existing main frame systems in the back-offices. As a result their EAI (Enterprise Applications Integration) remained incomplete. This resulted in end-users logging in separately into their legacy/main frame systems and using Front line CRM only for salutation purposes. This also causes some delay in the service. Further delay was caused by mandatory duplication.

According to Catherine Colbourne an end-user:

"Actually, to be honest, the amount of time we spend advising somebody can be a lot less than the time it takes, particularly if the call is something for a different Department, but once you've gone through all the data protection stuff to open up the plane you have to put loads on it because you've looked into it. So the amount of time you can spend logging, pass to a different Department, you have to do it three times on three different systems."

Technicality as an issue is also evident from the comments made by end users of the CRM FrontLine system:

"No, I just feel technically it's ineffective; I just feel there are too many technical problems with it. It doesn't want to perform, if I was to list all the technical issues I have with that PC and all the technical issues that I've had to log through it to other providers we would seriously have reams and reams of paper." Abid Hayat, end-user

BCC dealt with its IT skills shortage by outsourcing most of the IT infrastructure. As the departments grew larger and more independent, so did the IT systems. However, the systems grew bigger without any overall integration between the departments. The above reports indicate that BCC's outsourcing strategy of IT functions did not pay off in the case of CRM system integration. This was due to the

lack of advanced system integration knowledge by the service provider (Lagan, manufacturer of CRM FrontLine). End-users , especially secondees were moved from the back-offices to sit in a call centre managed by Vertex but still used their old systems to resolve the customer queries, using CRM FrontLine mainly for salutation purposes.

The above scenario resembles the study by Willcocks and Margetts on risks in large projects. The separation of IT management from policy making and business process alignment created a divide between IT Management and Business Process Owners at BCC. The e-government directive as discussed previously wanted to ensure a ‘one-stop-service’ for local authority customers. To be able to provide an integrative service it was important to have the various systems in different departments communicating with each other. System integration, according to Sarah Wood, seemed a time consuming task. However, without thorough system integration in alignment with the business processes this could not have been achieved.

5.2.2.4 Total number of departments on board the CRM FrontLine Project

As per December 2004 all together seven departments had come on board. However, there was no integration between the Front and back-offices. This may have been due to a limited understating of XML integration by the service provider. Majority of the customer queries continue to be resolved without using the FrontLine CRM.

There is also dissatisfaction among the stake holders from back-offices because of their exclusion from the decision making process. *“As a business we were very unhappy, very unhappy, we weren’t involved in the decision.” Richard Budden*

According to Tommy Wallace, Principal Benefits Manager responsible for the Benefits Service, he was not involved in any way during the planning, tendering or steering group meetings of FrontLine that took place prior to implementation. Moreover, there was no end-user involvement in the planning

or decision making process to take on board FrontLine. Others expected the Contact Centre to be under the management of their own department.

“It was late on into the process, it was decided it wouldn’t come to Neighbourhood Offices because for most of the year we had assumed that it would be part of it though nobody ever said it was, but it was, I’d anticipated, and my Line Manager had anticipated, that the place for the telephonic version of the Neighbourhood Office would be in with the same service that was delivering face-to-face contact.” Derek Leigh, Neighbourhood

5.2.2.4.1 Differing perceptions, interests and expectations (Long and Fahey, 2000)

Derek Lee from Neighbourhood Office claimed that his department was going to play a leading role in the CRM FrontLine implementation. He argues:

“My role then was Constituency Manager for some Neighbourhood Offices but also leading on IT issues generally. So I had always had a direct link into central IT over our use of new technology, and at that time it was anticipated that the corporate call centre would become part of the network of Neighbourhood Offices. So it was anticipated that my organisation would be the responsible organisation for the use of Front Line, so I was part of the initial set-up of that organisation, and in fact a lot of the tender documentation was based upon work we did two or three years previously, on what we wanted CRM to look like.”

He further argued that the Contact Centre should have been under their responsibility:

“We didn’t have the money to buy in the solution that we wanted at that time, but very shortly after that discussions began about having a telephone corporate call centre, and as we are the front end of the Council, on face-to-face contacts, the natural place for the call centre to belong is in our organisation.”

The contact centre (Vertex) management at BCC has had differing perceptions regarding the CRM FrontLine. Some seemed to have an opinion that by 2004 CRM FrontLine was now doing what it was supposed to do, in other words, providing help as a tool to answer the incoming calls. Others thought that it could do better than that:

“I manage the voice network at the City Council and we receive 40 million calls per annum from the public. A miniscule percentage of that is handled by the call centre, a miniscule percentage. The potential for further cascading the CRM solution has not been tapped yet.” (David Hall)

Lack of a broad stakeholder base in the decision making process also took away an opportunity for prolonged interactions between the departments. According to Orlikowski and Gash (1994) to interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it. While these interpretations become taken-for-granted and are rarely brought to the surface and reflected on, they nevertheless remain significant in influencing how actors in organizations think about and act toward technology. In the case of BCC the lack of a broad base and stakeholder involvement resulted in a system (CRM FrontLine) which was far from integrated with the back-offices (departments). A broad stakeholder base including the end-users and external customers could have led to creative abrasion regarding the new technology. This could have produced a shared understanding and a mutual perspective with respect to stakeholder expectations and differential interests.

Furthermore, Walsham (1992) confirms that contextual conditions of history and different stakeholder perspectives create the conditions for conflict at the level of process in Pettigrew's (1985) five-fold framework. Conflict between interests was evident at senior management level between Sarah Wood and Tony Glew. This conflict also trickled down at middle management level between David Hall and Julie Bullen resulting in David Hall's resignation. The conflict continued in the form of differing expectations expressed by our respondents from different departments and the end-users at the Vertex

managed Contact Centre. We will discuss the impact of this conflict on various business processes under the following heading.

5.3 Part 2: Case analyses -Analyses of the ‘Process’ regarding FrontLine CRM at BCC

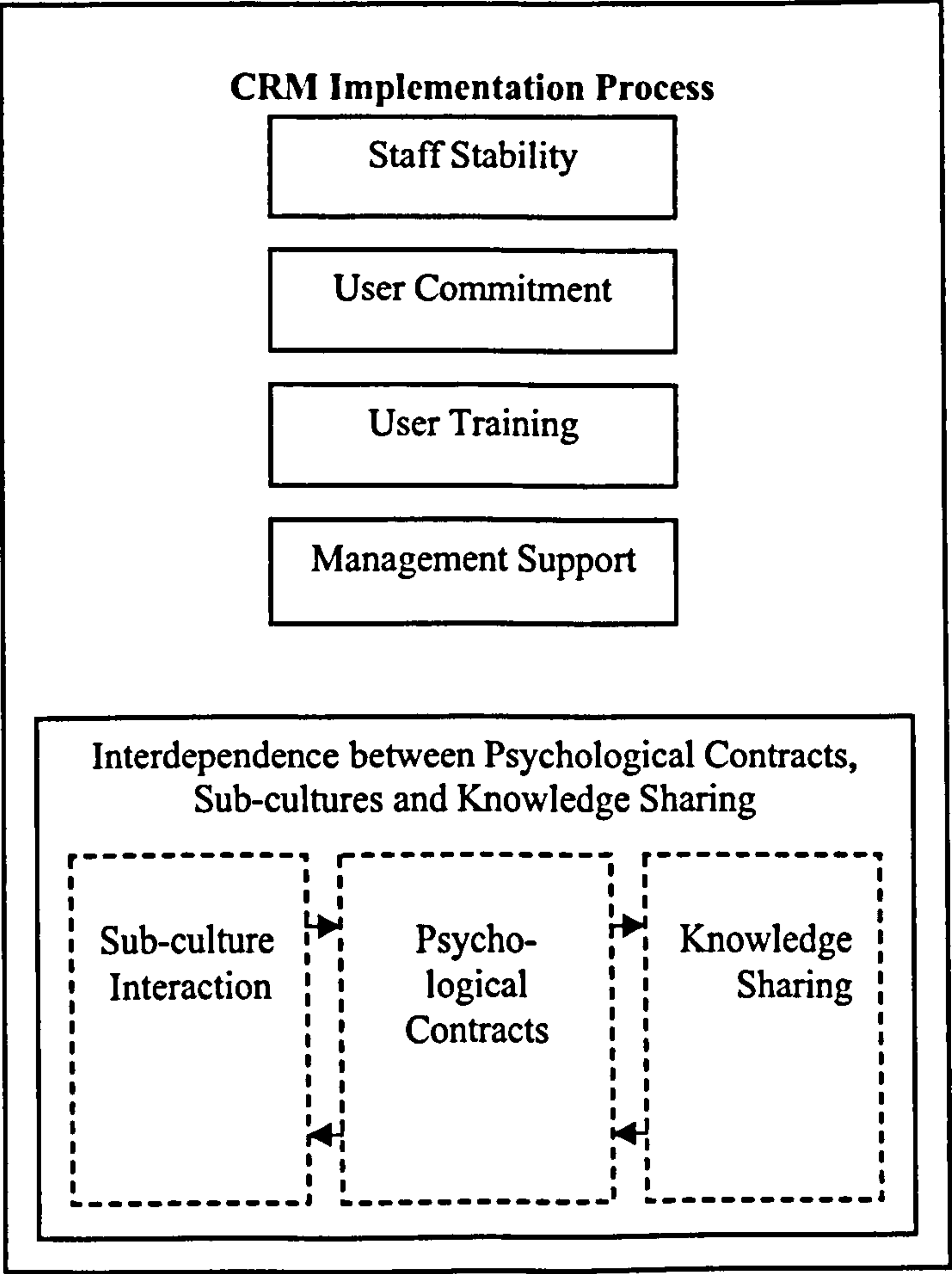


Figure 5.4 CRM Process including the salient elements derived from the literature review

5.3.1 The ‘Process’ of CRM Implementation January 2001 – Dec 2004

The process was closely monitored through observations, interviews and attending several staff meetings during the period of January 2001 – Dec 2004. A participative research method has allowed a deeper insight into softer issues as they happen.

In this section we will discuss various business processes and the impact that FrontLine CRM has had on them. Process in this case is discussed in terms of how the system implementation process was shaped by the 'history', internal and external contexts, and how the 'content' and 'process' have affected the performance of the users of the system (Pettigrew, 1997). This chapter discusses staff retention issues, user/stakeholder commitment, and user training (Pettigrew, 1985, 1990 and 1997). Finally we discuss the microelements, namely psychological contracts and their linkages with subculture interaction and knowledge sharing. We also analyse how our findings resonate with the extant research literature.

5.3.2 Staff Stability at BCC

The CRM project at BCC had difficulties in retaining staff throughout the project life cycle. This was due to the lack of a shared understanding and a shared mental space (Newell et al., 2002). A main underlying factor to the above could have been a lack of mutuality, and, as Boland and Tenkasi, (1996) put it, the lack of 'mutual perspective taking' resulting in a 'mutual low-obligation' type of psychological contract between Sarah Wood and Tony Glew and the people around them (Rousseau, 1995). As a result the staff turnover was high. Below we critically analyse staff retention issues stemming from the lack of a mutual perspective towards CRM FrontLine at BCC:

The project began to change focus (from a system integration approach towards a call answering one) early on during its design and development stage. During Jan 2001, Julie Bullen was appointed as a business manager for the CRM project. According to Bob Carter, temporary head of IT:

"It was felt that the project was over-weighted with IT and light on business need. The business need according to Sarah Wood, Strategic Director of Resources, was to bring back the focus towards call answering issues."

The number of people who could actually get through to BCC was as low as 10% on first call. This business issue, according to Tony Glue and Bob Carter, was identified in the 2001 Citizen Mori survey.

5.3.2.1 CRM project manager resigns from the CRM project

David Hall was the CRM Project Manager when Julie Bullen arrived during May 2001. Julie Bullen and David Hall got off to a bad start. David Hall got on very well with the consultant, but Julie Bullen did not. This could have perhaps caused some of the subsequent problems:

“It was a delicate issue but perhaps it did come down a lot to personalities at the end of the day.”
(Tricia Thrupp)

According to Tricia Thrupp, shortly after that, when Julie arrived and had different views about how the project should be run, it was felt better that David Hall leave the project. Furthermore, with the arrival of Julie Bullen as business manager, the project changed direction towards a call answering focus and away from the integrated approach focus. David Hall did not share that view either, and duly left the project. The interaction between Julie Bullen and David Hall lacked a mutual perspective and was based on a ‘mutual low-obligation’ type of psychological contract between them due to the lack of a mutual perspective and shared understanding (Boland and Tenkasi, 1996; Rousseau, 1995). It was at this time that Tricia Thrupp became the CRM Project Manager. According to Julie Bullen the team needed to be refreshed:

“My management style is different from Dave’s management style, I had clear views about where I wanted it to go and they didn’t quite fit with the views of both Dave and the consultant (Bill Newman). I didn’t feel there was enough business ownership so I decided that we needed to refresh the team.”

David Hall felt let down by the senior management, as he was there before Julie Bullen arrived. The non-reciprocal type of psychological contract present between Sarah Wood and Tony Glew can also be seen between Julie Bullen and David Hall. A process of ‘mutual perspective taking’ where

distinctive individual knowledge is exchanged, evaluated and integrated with that of the others in the organisation, was missing in the above case, and, following Boland and Tenkasi (1996), with equally deleterious consequences.

According to Tim Charge, Programmer, tension existed between Julie Bullen and David Hall during meetings:

“There was quite a bit of tension obviously, between Dave and Julie, there was tension between the two of them.”

The above tension resulted in the lack of a mutual type of psychological contract with a ‘mutual low-obligation’ type of contract between both parties involved.

5.3.2.2 Yet another outsourcing and its impact on staff stability

Vertex was chosen to manage the CRM call centre (also called the Corporate Contact Centre) and Head of IT (Tony Glew) left BCC (October 2001)

Sarah Wood wanted to outsource the call centre management to Vertex, who were partners with Lagan. According to Julie Bullen the reason was that the Council already had four call centres prior to establishing the Corporate Contact Centre, but the majority of those call centres were poorly performing according to the feed back.

Julie Bullen further states that:

“Prior to setting up the Corporate Contact Centre the feed back that we’d had from customers was that 30% of people couldn’t even get through, never mind get the problem resolved – so we’d got a huge issue about just access in the first instance”.

Julie Bullen further argues the case for outsourcing:

“So we’d had that direct feed back from customers. We’d certainly had it from Members, as well from Councillors, telling us the feed back from their Constituents, and so we felt we needed to improve the access. Now we’d got four (centres) in the Council already. They weren’t performing very well – what the Council didn’t want to do was create the same thing but in a different location. They really wanted to say, ‘This is a new service with a different culture, customer focus culture, the people on that phone will own the problem etc etc,’ – so they didn’t want it to be perceived as the same thing but somewhere in a different place.”

BCC according to Julie Bullen and Sarah Wood felt that it was an opportunity to look at other people potentially delivering it. However within the tender they did invite an in-house bid.

“That was a guy who at the time was Head of Revenues, a guy called Barry Powell, and Barry having been given the Lead Officer for the Council, looked at it and decided that he felt there was insufficient experience in-house in order to deliver that service to the requirements, so he actually partnered with Vertex so the bid was a joint bid from the City Council and Vertex and when we went through the evaluation process that was the bid that actually went through. So it wasn’t a solely private sector bid it was actually done in partnership with the in-house team.” (Julie Bullen, Business Manager)

Tony Glew, on the other hand, had a view that it might slow things down. He was keen on back-office integration in the system. His view was shared by both David Hall and Bill Newman. Strategically, Sarah took a different view. According to Tony Glew:

“Her view was ‘To hell with boys playing.... much more important is - Get the telephones answered!’”

Sarah Wood decided to outsource to Vertex as Tony Glew left during Oct 2001. Tony Glew gave six months notice before leaving. Tony Glew's view was not taken onboard and during December 2001, the decision was made to outsource yet again, however, this time the management of the CRM call centre, to Vertex (an independent company). The contract was signed during March 2002. According to Julie Bullen this was the start of a transition programme.

According to Bob Carter (former head of IT), outsourcing to Vertex was more of a political decision as there were issues with regard to the performance of officers providing service. Andy Howell appeared to be the person pushing this idea forward.

In April 2001 consultant Bill Newman presented a report to Sarah Wood, in which he promoted the idea of integration between front and back-office using FrontLine. That idea was never acted upon. Bill Newman was relieved of his services. The rest of the consultants were assigned the role of designing scripts for the CRM contact centre.

The management of the contact centre was given to Vertex. In normal circumstances the City Council would have moved all the call centre staff over to the contact centre, necessitating sharing of undertakings legally. The politicians were not prepared to do that. According to Bob Carter, they seconded people from BCC to Vertex. In this arrangement, the management of the staff was done by Vertex. However, all the staff's terms and conditions were managed by the City Council.

5.3.3 The staff stability issues continue over 2003 and throughout 2004

Julie Bullen (Corporate Customer Relations Manager) moved back to her old job at Sheffield City Council (SCC) on 24th November 2003. Julie Bullen was replaced by Dr. Jason Price and Glen Evans replaced the acting head of IT Bob Carter.

5.3.3.1 Secondees start to move back to BCC

Moreover, the secondees under Vertex management as per September 2004 were applying for jobs to go back to the City Council and their back-offices.

As per August 2004, according to Afran Hussein, a non-secondee team manager at Vertex Corporate Contact Centre, the secondees were going through a phase of redeployment back to Birmingham City Council. They had been at the contact centre over two years. He further states that:

“Originally a lot of the secondees did raise a lot of issues internally with BCC regarding the whole outsourcing process. After two years the initial review by BCC was, ‘Re-deploy them all back into the Council.’ They’re all getting re-deployed back into different areas of the Council. So they’re not going back to their own specialised fields, but wherever they can actually find them a job.”

Secondees carried with them considerable codified and non-codified knowledge and experience from back-offices. In returning to BCC they took with them their expertise and experience thus depriving Vertex of an important asset, namely non-codified/tacit knowledge.

Afran Hussein adds:

“Secondees are definitely a great asset to any contract, because the knowledge and experience that they have is something that they need to download and pass on to any other outsourcing organisation.”

During their stay under Vertex management the secondee expertise was not exploited to its full potential. Secondees were used in training non-secondees in a very limited form. *“It was very limited because Vertex have their own trainers.” Afran Hussein Vertex*

Afran Hussein admits the importance of using secondees in training the non-secondees:

“It wasn’t exhausted to the full extent. We’re probably looking at outsourcing or looking at an organisation like this – it probably would be better to have BCC (or having secondees) actually doing the training, or playing a big role in training, because obviously the knowledge and experience would then be shared.”

According to Raj Patel, Senior Accounting Assistant on Council Tax, North and South, the outsourcing has not worked:

“I’d said that basically because it’s gone to private industry. So, I mean, the service is not going to be as good as what we could have provided within the Council that was already being provided at our Waterloo Street. So it’s not as good service as it should be.” Others like Richard Budden from Environmental Department want their secondees back as they feel they have lost the expertise from their department:

“I think we need to decide, particularly as I’m losing the business expertise within the Contact Centre. We need to form a view about what sort of calls the Contact Centre should be able to take. Is there a need for back-office? And indeed, when I found out that the secondees were going I said to Adrian, ‘If they’re going, can I have them back please and we’ll use them as a back-office here and we’ll leave the Vertex staff to handle the simple, quick-win enquiries and we’ll have these people back.’ ”

Staff stability has clearly been an issue at BCC regarding their CRM initiative. As reported to us, several FrontLine CRM stakeholders left without seeing the project through to its completion. This has been the case at all levels of hierarchy, at senior level, middle management and floor level. The staff instability at higher level of hierarchies has had a negative impact on user commitment, which we discuss below.

5.3.4 User commitment

User commitment continued to decrease at BCC as the stakeholder base became narrower due to staff retention issues discussed above. We will now discuss this at different levels of hierarchy within BCC.

Initially the BCC CRM initiative had senior management sponsorship in the form of Sir Michael Lyons, the chief executive, who saw a CRM system in action on his trip to Brisbane. According to David Hall:

“Andy Howell saw this as a good opportunity to kill two birds with one stone. One, this would eliminate the call answering issues that the city was having. The second, that implementation of a CRM system will be in line with the government directive.”

Both Tony Glew and Sarah Wood of senior management bought the idea initially. However, as they started to work on the implementation plan, their differing opinions became more explicit and their psychological contracts became more individual than mutual. Tony Glew was perceived to be IT-led, whereas Sarah Wood wanted to focus on resolving the issue of public calls not getting through to BCC. They may have started with a mutual understanding on the surface (Anderson and Schalk, 1998) yet they interacted more closely and creative abrasion took place, the implicit part of their psychological contract became more explicit, and, following (Makin et al., 1996), more obviously misaligned. Where the psychological contract was previously implicit, this had resulted in a lack of clarity for both parties on the level of their disagreement (Makin et al., 1996).

Creative abrasion can positively influence performance (Leonard-Barton, 1995). In this case, however, it created a divide which not only slowed down the progress of the CRM project development, but also resulted in Tony Glew’s resignation, and subsequent suspension of the original FrontLine development in favour of the revised ‘Contact Centre FrontLine’ solution with its call answering focus.

The arrival of Julie Bullen as business manager reinforced the direction of the project towards a call answering focus and away from the integrated approach focus. David Hall (CRM project manager) did not share that view either and left the project. This narrowed down the stakeholder base further.

Others were hoping to keep the customer contact centre internal. According to Richard Budden, Business Manager, Environmental Services:

“We’d been working on the assumption, all the way through, that the call centre would be set up, but it would probably be internally run and managed. And it was a bit of a shock to some people on the group that hang on, because I think some people had sort of seen roles for themselves within the subsequent development of the organisation – and, ‘I’m going to run this,’ and, ‘I’m going to be doing that,’ – as we were sort of bought into it. And that was suddenly taken away, and it was going to be a managed service. So I think at that point a lot of people probably lost a little bit of interest.”

User commitment was also affected by the fact that the original FrontLine CRM decision had a narrow base. This narrow base has not expanded over the years and continues to cause frustration and dissatisfaction among the stakeholders of the system. Lack of stakeholder involvement has resulted in lack of commitment.

“I think it, a lot of involvement of key players (I mean those that were actually involved in running the Contact Centres departmentally) should have been involved in the decision making process. Myself, Martin Reynolds, who used to be with the Revenues system, who is now at Vertex, Dave Hall, he used to be responsible for Communications. We’ve had a fair, idea, of what was required and what would work.” Richard Budden

Richard Budden further expresses his frustration:

“Dave Hall, and to my way of thinking, he should have been involved and perhaps co-ordinated it whether or not we agreed with the decision to outsource the Division and you had a contract that was given to Vertex. That I would certainly never to have agreed to, I don’t think Derek (Derek Leigh) would either, simply because it totally – the quality side of it – it just went on the number of calls handled and there are so many get-out clauses for Vertex. We were excluded from the process and as a result of that we lost the knowledge.”

According to Richard Budden, Environmental Department, who was not involved in the decision making process:

“The quality, aspects have been ignored.”

He further states that his expectations of the CRM initiative are very low. He argues that:

“It’s because they weren’t very high in the first place”

Quality has been an issue for Council tax as well. Doug Skinner Council Tax area manager states:

“My general feeling has been one of frustration and I’m sure that’s shared by other management here. We’ve been conscious of more complaints coming through because obviously it has a knock-on effect. While people aren’t getting through on the phone then it has an impact on our face-to-face enquiry service, so we had problems up there, we get more letters sent through. So rather than easing the burden, it’s felt at times like they’re contributing to the problem because there’s not enough people answering the phones, people aren’t getting a good service when they ring through. So hopefully that’s behind us but that’s my experience so far.”

The above statements show lack of trust and shared understanding. This has had a negative impact on the user commitment at all levels. At senior management level, lack of commitment is evident through people not seeing the project through to its completion. At middle management level, managers were not happy due to lack of their involvement during pre- and post-implementation phases.

The secondees leaving the Vertex managed Contact Centre were happy to leave the place due to their lack of commitment to CRM FrontLine. Their contract agreement did not allow them to be upgraded to a team leader position.

"I'm in a land where, when it suits certain people then we can be recognised, when it doesn't suit certain people we cannot be recognised. A lot of the secondees feel, here on site, that they're not wanted from both sides basically - so you have that disadvantaged group of people who, a year ago, outwardly were the people who were keeping the centre running technically and expert wise." (Abid Hayat, secondee)

Secondees, however are paid more than their non-secondee colleagues. This has caused a lot of dissatisfaction among secondees and non-secondees.

This dissatisfaction was expressed by Pamela Libust, a secondee:

"The level of pay that I was on, to the level of pay that they were on, affected my colleagues because they felt they were sitting next to someone who was on £16,500 and they were on £11,000 but doing the same job as them. We assured them that because we are on more money than them it doesn't matter, we will still try to give them the knowledge that we had. As it grew to the end of the year, they became more knowledgeable – that the staff were getting really angry – that it was now 'us' and 'them' - we were divided – there came a division between us. One it was about the money, two it was about the knowledge that we had and three it was really listening to what we were saying about how we were treated – what we were doing, the flexi-time that we had, how we worked, having to structure

was working through us, and we were being treated differently to the Vertex staff, because we had been told that we could still have our flexi-time but the Vertex staff couldn't have it."

At Vertex, the management also expressed their opinion:

"I think there was a morale issue for a time. I wouldn't say that was the main common denominator, but there was certainly a morale issue which affected people's views on the contracts and on the company, and for a while we did lose some personnel because of that."

The above created a divide between secondees and non-secondees and their interaction lacked creative abrasion and a mutual perspective (Boland Tenkasi, 1996; Anderson and Schalk, 1998; Makin et al., 1996; Rousseau, 1995; Shore and Barksdale, 1998; Thibaut & Kelley, 1959). This further resulted in a lack of shared mental space between the two groups (Newell et al., 2002). The relationship deteriorated between the two groups due to the lack of reciprocity (Krogh, G. V. et al., 2000).

The conflict grew as both groups started to find out more about each other (Laurence and Lorch, 1967) as Pamela Libust states in connection with sick leave:

"So there was a difference because we were still under the umbrella of Birmingham City Council, so as a staff we still had to be treated as Birmingham City Council staff which then affected the Vertex staff. For example, sick on duty, there was a big issue about that. If you're sick on duty ('you' referring to a non-secondee) you've got to phone in by 10.30 am – well if you were sick on duty you had to do half of your shift. And there was an uproar about that. But then we (referring to secondees) had to go back to Birmingham City Council. Because it doesn't happen under the Birmingham City Council staff, and not because we're seconded makes any difference, so again we were treated differently to the Vertex staff. And that's where the conflict between myself and colleagues, well all of us I should say, grew. And it's worse now because they're saying now they can't wait to see the back of us."

Pamela Libust further states that, seven secondees left within one month, when they started at Vertex. These were replaced, however with Vertex staff. The ones left behind were not happy to be left behind:

“We’re very upset about it because we do want to be here in the first place, so we’ve been asked now to just, carry on doing the job.” Pamila Libust, secondee

Secondees’ expertise whenever exploited by Vertex did not get rewarded extrinsically. Secondees felt that their fundamental loyalty lay with BCC and wanted to move back to their previous jobs. Vertex did not feel responsible for their job situation as their (secondee’s) employment contract was managed by BCC itself. This caused a lot of dissatisfaction among secondees and gave rise to an ‘employee under-obligation’ type of psychological contract between secondees and Vertex management.

Pamela Libust expresses her frustration further:

“I’m totally stressed, absolutely stressed. I enjoy my work so much. I enjoy what I do. I enjoy the environment that I work in, which is the building. I do not enjoy being treated like a child and going ten steps backwards. You treat your things to make things work – as I’ve always said the nail is not broken, if it’s not broken why mend it – and they keep on mending things here that don’t need mending. If they left the whole system as it was things would have worked better, but they keep on implementing new ideas – then we come back to the old ideas, it’s just called a different name, and that stresses me out. I want to, I told them, I’m quite happy to be the trainer. I’m quite happy to train my colleagues, but they tell me they can’t pay me. So I have to wait for BCC to find me a job.”

The secondee psychological contracts, resulting from such mistrust, were of ‘employee under-obligation’ type and lacked a mutual perspective with Vertex (Shore and Barksdale, 1998; Boland & Tenkasi, 1996). This is also evident through the comments made below regarding the re-employment of secondees by Doug Skinner at Council Tax regarding secondees who have not had any job satisfaction at Vertex Contact Centre:

“Very recently an arrangement has been whereby they (secondees) can come back into Birmingham City Council, and I think they have grabbed that with both hands and have been very keen to get back into the Authority, so I think that tells its own story.” Doug Skinner

Various changes at the senior management level influenced subsequent developments. According to David Hall (Former CRM Manager), deputy leader Andy Howell only remained in the picture for a while providing support to Tony Glew and Sarah Wood. Chief Executive Officer Sir Michael Lyons left prematurely. This again points towards a lack of stakeholder commitment at senior management level.

User commitment was also affected by the technical issues arising as a result of a lack of system integration with back-office and other e-business applications. This gave rise to data migration issues and duplication. End-users were using different systems. They used FrontLine to answer and log a call and then logged in to a different system to follow through the customer’s query. According to Abid Hayat an end-user:

“FrontLine duplicates more than complicates and in duplicating it complicates because you have to verify your customer, customer details when it comes to Benefits and Revenues anyway, but with FrontLine you have to take all the details again, add them in first. So you get a repetitive state of taking the customer’s details and sometimes that can cause delay which was already in a red zone to an elevated red zone. From the feedback I’ve had from CA’s it duplicates.”

Adrian Stafford confirms the issues regarding duplication:

“An example being – customer phones in we put their name and address details into FrontLine to check who they are we go into MBAS to check their claim out we’ve got to put their name and address in again, because there’s no interaction.” Adrian Stafford, Customer Corporate Relations BCC

Abid Hayat further states that the system is slow and has a lot of technical problems:

“I think it’s slow. I think it has too many technical problems. It will produce a technical issue a day. It will produce an error message or it basically will error. It will break down here at least once or twice a day, because it’s telephony linked as well plus it has the FrontLine aspect plus it has the web link plus it has the middle ware plus it needs to talk to Panorama. There are too many things going on with that and I think the other support functions that are coming in, all those other providers of information, i.e. Panorama, BCC web site, the telephone, things along those lines, I don’t think they’re all being managed effectively. On a technical basis that would result in it having technical problems daily. I just feel that there’s too many systems not actually talking to each other correctly.”

The above analysis with quotes from our respondents shows how user commitment suffered at all three levels, namely senior management, middle management and floor level. Relationships were not reciprocal and evidently lacked a mutual perspective (Krogh et al., 2000 Boland Tenkasi, 1996). This resulted in psychological contracts with mutually low-obligations between the groups (Shore and Barksdale, 1998). The system itself acted as an inhibitor due to its technical incapability and a lack of thorough integration with the back-office, resulting in lack of commitment, and stress.

5.3.5 User training issues in the ‘Process’ of our framework (figure 5.4)

Under this section we will discuss the training issues that rose at Vertex managed Contact Centre. We will discuss this under the light of comments made regarding training quality by different stakeholders.

The training provided by Vertex to the contact centre agents was more in the form of descriptive knowledge, which included what the system can do and how the written scripts can be used to answer the incoming calls (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995). However there were some qualitative issues regarding the training.

“I felt it was inadequate. I felt it was poorly managed. I didn’t feel that the trainers were aware of how to utilise the system any better than the people they were training.” (Abid Hayat, Contact Birmingham Duty Manager)

“They hadn’t for instance, (they didn’t deliver) very high quality training materials to go with the training so the staff were, having been trained, walking away and not having anything they could refer to.” (Tricia Thrupp)

“I think we neglected, I think we could have spent more time on helping Vertex employees understand how the Council works.” (Julie Bullen)

Training provided by Vertex did not impress the BCC staff and management. However, in our analysis this was because Vertex did not have enough knowledge about BCC departmental culture. Their interactions with BCC were not on a prolonged basis and did not allow creative abrasion to take place (Newell et al., 2002; Leonard Barton, 1995). Following Boland and Tenkasi (1996), this resulted in a training which was not based on ‘mutual perspective taking’. On our analysis, there was an agreement at senior management level that saw mutual psychological contract in place. However, this agreement was not shared by the people on the floor. According to Leonard-Barton and Kraus (1985) it is important to plan for the sharing of knowledge from the old operations, in which people knew the materials and the product very well, to the new processes. They further argue that the developers of the new process often know their tools well, but rarely do they understand the materials and processes to which their software is applied or the people on the floor who have been working with both for years. In the BCC situation secondees from the back-offices were put in the contact centre environment, but their knowledge was not exploited fully to complement and enhance the quality of the end-user training.

In our analysis, the BCC senior management when signing the contract with Vertex had an illusion of consensus which did not expose the innermost feelings of individuals involved (Gee, 1992). Hence it

resulted in inadequate training material and lack of communication between the parties. The BCC staff were more fully trained and experienced with considerable codified knowledge regarding BCC and its culture. More than half of the Contact Centre staff were existing BCC staff (secondees) whose training needs were, in many cases, different from those of newcomers (non-secondees).

5.3.5.1 The window of opportunity for adoption continues to close (Orlikowski and Tyre 1994)

As the users of the system became more familiar with the systems and its strengths and weaknesses, the work-arounds, the shortcuts and the 'tricks of the trade' started to surface (Vincenti, 1984; Orlikowski, 1996; Orlikowski & Iacono, 2001). According to Catherine Colbourne (non-secondee end-user, Contact Centre, Birmingham), initially the call centre agents tried to use the FrontLine CRM system as much as they could but as time passed they started to realize that answering the calls was taking too long. So they started to make notes while answering the calls using the system as little as possible.

Interviews with the agents showed that they learned to take notes manually while on a call and then after the call put the logs on the system. This is the case especially with agents from the revenue and benefits section. A brief interview with the recruitment section in early 2004 showed that they used FrontLine CRM for salutation purposes only. They then had to log into the back-office system separately. This was the case with both benefits and revenues departments. This showed that, as system adaptation time passed people were finding new ways of working with the FrontLine system. One way was using it as little as possible. The system was getting adapted by the users rather than users adopting the system, as Orlikowski and Tyre (1994) found in their study.

Richard Budden reports that the benefit with the externally managed Contact Centre has been that there are, within the contract, clear quantifiable performance indicators that say, '*Yes, X number of calls have got to be answered to hit a certain percentage call rate*'. However there are other issues.

According to Richard Budden:

“What it hasn’t addressed is the qualitative aspects. Whilst people now get through - and that was an initial huge win for the City because there was a lot of bad publicity around the fact that people couldn’t get through to us and to other departments.We’d got a big success with people now being able to get through, but I don’t think - and I wasn’t involved with the letting of the contract for the external service provider - I don’t think there was much put in the contract around the qualitative issues, as I am now finding as a business user.” Richard Budden

The contact centre managed by Vertex went live in March 2003. It was divided into three sections. Section one had advisors handling calls regarding environmental services and neighbourhood advice. Section two dealt with benefits and revenue. Section three (gone live early 2004) dealt with recruitment services. Advisors in all the sections used FrontLine CRM system to read scripts, in order to correctly use the salutations.

According to Tim Charge (IT programmer), in handling the calls related to the environmental services the FrontLine system uses a middleware called ‘Connect’ supplied by a company called MVM, to interact with the back-office system called ‘Panorama’. The matters, regarding which the call centre agents are able to provide help to the callers, are information requests and specific issues such as programming the disposal of bulky waste items or missed bin collections. However, not all the call centre agents have access to the full version of Panorama. Only the BCC secondees are given full access (Richard Budden, Environmental Services Department). This means that non-secondees with a customer query pass on the information manually to the secondees in order to achieve a resolution.

Secondees from BCC were trained separately from non-secondees in the FrontLine CRM system. A collective training of call centre staff could have provided an opportunity for the staff to interact with each other on an informal basis. Such interactions on an informal level might have helped to start the process of ‘mutual perspective taking’ (Boland and Tenkasi, 1996) and a shared ownership, leading to ‘mutual high-obligations’ psychological contracts thus facilitating knowledge sharing including the sharing of short cuts and ‘tricks of the trade’(Shore and Barksdale, 1998).

According to Abid Hayat, secondees carried with them BCC culture, whereas the non-secondees hired by Vertex to handle the incoming calls did not. Secondees were more aware of the process loop in handling incoming calls because of their BCC background. This knowledge possessed by the secondees has not been exploited fully. The training was short, only three to four weeks according to Abid Hayat and was different for secondees as compared to non-secondees (Wathne et al., 1996). 'T-shaped skills' and 'knowing of what others know' could not be fully developed due to the shortage of time and lack of prolonged cross-cultural interaction between secondees and non-secondees (Bakhtin, 1981; Krauss and Fussell, 1991; Lawrence and Lorsch, 1967; Iansiti, 1993). According to Abid Hayat there is very little interaction between the three sections present at the contact centre. The chances of creative abrasion taking place are limited. The common coffee or lunch room is mainly used by the recruitment services thus the limited interaction that takes place is in more formal types of setting. Lack of informal settings may work as an inhibitor to the sharing of 'tricks of the trade' at the contact centre. This, combined with lack of 'mutual high-obligations' psychological contracts due to the departmental subculture (Shore and Barksdale, 1998), a lack of thorough system integration and vertical knowledge silos, have, in our analysis, undoubtedly inhibited the sharing of 'tricks of the trade' across the departments and between the front-office and back-office (Ross, 2003).

The eventual aim into late 2004 was that FrontLine CRM would be a fully integrated solution and then BCC would start to reap the benefits. Training had improved, according to Abid Hayat, stating in late 2003. Some feedback from the staff has been picked up by the trainers and resulted in some improvements in training the new comers, as recommended for example by Vincenti, (1993). However as reported to us in late 2004, most of the contact centre advisors still did not see the FrontLine system as a facilitating tool in their work. They perceived it more as a burden. According to their perception the FrontLine system was slow and broke down at least once or twice a day. Contact Centre advisors also perceived that there were too many screens to juggle with and too many systems which fail to communicate with each other. Contact Centre staff also showed their concerns regarding the management of different systems in use:

“I think in England they use too many Chiefs and not enough Indians.” (Abid Hayat, secondee)

Secondees as per late 2004 were leaving the Vertex managed Contact Centre and were applying for jobs within BCC. They did not feel committed to the CRM Project as discussed previously. Their expertise was exploited in a limited way:

“We had a couple of their secondees here to iron out any wrinkles that the Vertex trainers couldn’t do because they, obviously, weren’t familiar with the system, so we had about eight people, I think it was. Some of them are now going back into the main BCC work field, but they were with us at that time and still with us up until today.” Maxine Williams

Moreover, whenever their expertise was exploited by Vertex managed staff, it did not result in an extrinsic reward.

As Pamela Libust puts it in her own words:

“I’ve been doing the supervisory role, as they call it a Technical Specialist. I’ve been a Technical Specialist for over one and a half years, so I’ve been looking after my colleagues as well as new staff. I have taken an escalated course, which is not part of my job as a CSA (Customer Service Advisor.) I have trained all new staff that have come in, along with my colleagues and I have set-up forum meetings – I am a forum representative as well as, so I do feel that we have been exploited because we haven’t been paid for what we’ve been doing.”

Non-secondees at the Contact Centre were not happy about the above situation where they had to do the same amount of work as their secondee colleagues and yet were paid at a much lower rate than them. This caused friction according to Maxine Williams, non-secondee:

“Yes it’s caused a friction in that they were obviously getting more money, but then again their knowledge base is greater than ours and their experience is greater than ours. We’ve just been introduced to this, whereas that’s something that they’ve been implementing and doing for a number of years, so therefore I personally think that the difference in wages reflects that. What a lot of Vertex staff were hoping for as the years have gone by – especially by the 18 month mark – they were hoping that our wages would be more on a par with BCC staff, but that wasn’t to be. And again that’s started a lot more friction in that Vertex had to roll out different ways of promoting us as well as giving us more money for the skills that we had since obtained. But I don’t think that Vertex will ever be able to match what BCC are doing in like for like positions. I don’t think that they will because, I think, that BCC are more generous in that way.”

There were other reasons why non-secondees felt they did not have as much access to the back-office systems as their secondee colleagues. Secondees due to their loyal mutual obligation contracts with their back-offices could log on the back-office systems (Raw Panorama) using their user name password. However, non-secondees were deprived of this full access to the back-office. This made them dependent on their secondee colleagues. As a result, there was freer sharing of knowledge (‘tricks of the trade’) between the secondees and the back-office. Scholars, (Gregory, 1983; Riley, 1983; Pettigrew, 1979, Schein, 1985; Strauss, 1978), further suggest that people tend to share assumptions, knowledge, and expectations with others with whom they have close working relationships. In the above case the ‘tricks of the trade’ and short cuts did get shared to some extent due to secondees and non-secondees working in the same room.

The secondees’ situation at the Vertex managed Contact Centre has put pressure on the non-secondees. They feel worried about the knowledge which they never got the opportunity to acquire and are aware that it will leave as their secondee colleagues leave the Contact Centre. A lot of non-codified/tacit knowledge stored in the minds of secondees has already gone with them.

Pamela Libust, one of the few secondees left behind at the Contact Centre as per end of year 2004 reports:

“The knowledge went with the majority of my colleagues. The service level, the calls coming in, the queuing system has gone tremendously out the door because the staff here – we haven’t got the quality of staff to take the calls. So the majority of time we were training and getting them up to the level that they will need to be to take calls on a faster level. The quality is non-existent, so there’s a lot of errors being made. There’s people who will start today and leave tomorrow, so then there’s no commitment to the job, where [whereas] the people that had left or were here for two, three, four, five, probably six years – so those that had more knowledge than myself, at that point, had left, so left [thus leaving] people, who had just started, to look after people who were coming in, Vertex staff. So my concept of it was that it was disorganised and it was all about quantity not quality. We had more complaints, irate callers.”

As the secondees have left the non-secondees have realized the value of having them (secondees) around. As Maxine Williams, a non-secondee who takes calls for environmental services, expresses:

“The relationship in the beginning – it was very ‘them and us’. Then when we realized their value as time has gone on, we’re now..... you see they were only here for I didn’t realize that they were here for an allotted time. They were seconded here just for an allotted time, which is now running out, and now they’re realising that they’ve got to go back into the main BCC stream of things. I personally am getting the feeling that a lot of Vertex, especially the older ones, who know the value of their [secondees] knowledge, that’s going to be taken so we’re getting a little bit worried as to how we’re going to cope, free on our own, because we have relied on them for a lot of background knowledge, a lot of in-depth knowledge that they’ve got, and how Environmental works.”

There were clear indications as per November 2004 that Vertex management were trying to exploit the non-codified, tacit knowledge possessed by secondees at the Contact Centre. However, this went, as the secondees continued to stream out. This has created a knowledge vacuum at the Contact Centre.

The people who replaced secondees, lack in particular, the non-codified knowledge regarding the BCC back-offices. There was no opportunity for ‘tricks of the trade’ to get shared from secondees to non-secondees.

5.3.6 Management Support

Under this section we will critically analyse the management support provided by the management for CRM FrontLine at three levels of hierarchy, namely senior management level, middle management level and floor level.

5.3.6.1 Management support at the senior level

Tony Glew did not get enough support from his superiors to implement his system integration perspective. The deputy leader Andy Howell supported Sarah’s idea of getting the calls answered. However, Andy did have a good working relationship with Tony. According to Ian Paterson:

“It got very political in terms of Tony had a good working relationship with the Deputy Leader, Andy Howell – so did Sarah Wood, but obviously that was an issue as well. But my view of why Tony left Tony left because he felt that he was being stopped doing what he needed to do to sort out IT by Sarah Wood. He didn’t have the backing, the financial backing. He felt constrained and he just didn’t feel that he could do the job that he was supposed to be doing.”

Support at senior management level was more towards a call answering focus type solution. This was due to the fact that the public was not getting through and politicians wanted this issue to be resolved as quickly as possible. This however resulted in lack of business IT alignment (Willcocks and Margetts, 1994). The knowledge shared at the senior management level regarding their innermost feelings created a negative type of abrasion between the senior management and caused division based on different approaches and differential interests. The stakeholders with a system integration approach

were classified as 'IT people' by the group that supported Sarah Wood. The group supporting Sarah Wood claimed to have the business perspective on the whole CRM situation.

According to Orlikowski and Gash (1994), to interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it. While these interpretations become taken-for-granted and are rarely brought to the surface and reflected on, they nevertheless remain significant in influencing how actors in organizations think about and act toward technology. Above at BCC Sarah Wood's supporters share their frames and have a mutual, shared understanding. This was also the case with Tony Glew supporters. They also shared their frames and had a shared understanding regarding an integrated solution, in which systems need to talk to each other, in order to provide a 'one-stop-service'. The two groups however, did not have a common shared frame. The innermost feelings when revealed created a divide instead of a shared understanding (Leonard-Barton, 1995).

Furthermore, Walsham (1992) confirms that contextual conditions of history and different stakeholder perspectives create the conditions for conflict at the level of 'Process' in Pettigrew's (1985) five-fold framework. This was the case with the above two groups, one supporting Tony and the other supporting Sarah. Management support given to the middle management by Tony and Sarah was coloured by their respective frames. This resulted in Julie Bullen's conflict with David Hall. Most of the key supporters of system integration strategy left the project. A 'mutual perspective' (Boland and Tenkasi, 1996) was never achieved and thus knowledge, in particular tacit knowledge, did not surface or get shared in discussions. The above two groups lacked trust and loyalty (Janssens et al., 2003). This resulted in a psychological contract that lacked the element of loyalty and trust between the above mentioned two groups. According to the above, the pattern of management proved to be more divisive and destructive than creative and unifying.

5.3.6.2 Support at middle management level

As discussed above there was lack of trust and commitment between David Hall and Julie Bullen. This resulted in David Hall leaving the project. According to Janssens et al. (2003), when investigating the employer obligation of long-term involvement and the employee obligations of personal investment, it was found that flexibility and loyalty are related to high affective commitment. Moreover, according to David his expertise in the Call Centre environment was not exploited. The IT implementation team, formed with a limited involvement at departmental level, did not however continue as an on-going implementation team after the launch of the Contact Centre.

According to David Hall:

“They went for an implementation team, and instead of keeping that as an on-going implementation team, that team then had to be the team that were servicing it and supporting it. You should always have a situation where your support team is separate from the implementation team so you can keep the momentum and impetus going. What happened was, the implementation team ended up being the support team. And they’re still having to give support, and they’re being pulled from pillar to post from that point of view. So there hasn’t been sufficient (I don’t think) resources addressed and committed to it as an overall project to ensure the continued roll-out.”

The above also shows lack of continuity in the implementation scheme. The continuity was affected by the lack of commitment resulting in stakeholder resignations. The team now led by Julie Bullen handed over the management responsibility to Vertex (outsourced agency) to manage the Contact Centre. Moreover, there are doubts expressed from our respondents from BCC regarding how the Contact Centre is being managed:

“What I’m saying is, given the fact that it’s outsourced at the moment, we should be working more with Vertex to develop improvements to what they are doing. I don’t think there’s sufficient performance monitoring or management of Vertex. But again people that wrote the performance

standards were new to the game – they weren't aware of what we call 'tricks of the trade'. To be quite blunt with you, there's lies, and then lies and statistics." David Hall

Others had higher expectations and their expectations do not seem to have been met:

"I think we expected big things because, from a Public Sector perspective you expect a Private Sector company to come in, bring in it's expertise, make the sort of improvement that you can't make in Local Government because of the constraints with funding and I'd say it's been a sense of frustration."

Doug Skinner

A lack of trust is expressed by our respondents from BCC regarding the capability of the Vertex managed Contact Centre. Walsham (1992) confirms that contextual conditions of history and different stakeholder perspectives create the conditions for conflict at the level of process. This conflict can be sensed in the above reports made by our respondents from BCC.

The above conflicting situation between Vertex and BCC back-offices has resulted in a withholding and denying of access to technology knowledge by the back-offices (Vincenti, 1993). The knowledge, in particularly non codified or tacit knowledge has mostly remained buried in the back-offices and the owners of such knowledge are not ready to let it go. This is evident in the case where only secondees have been provided full access to the back-office systems and their colleagues non-secondees are not. This is due to the lack of trust and commitment expressed by our respondents in the back-offices at BCC. The psychological contracts resulting from such a lack of trust are of employee 'under-obligation' type and lack a mutual perspective, which yield the poorest results (Shore and Barksdale, 1998).

5.3.6.3 Management support at end-user level

End-users (non-secondees) were not trained on the back-office systems. They had a limited access to BCC back-office systems:

“That’s right, which we don’t know; they didn’t train us on raw Panorama [back-office system] at all. Only a certain I think now a few individuals are going to be trained up to the standard of BCC employee’s, in that they can re-open jobs and stuff like that.” Maxine Williams, non-secondee

This again confirms a lack of trust shown by the back-office in not allowing the non-secondees full access to the back-office systems.

Our non-secondee respondent further adds:

“I would, I would like that. I would like to be able to re-open and close jobs ourselves. Yes, that would be a boom if we could access raw Panorama. Also the way in which it brings up the information on my own personal PC – I’d like it to be a lot faster. I can’t think of anything else apart from accessing raw Panorama – that’s the key, that’s what made BCC staff so invaluable to us.”

Secondees and non-secondees were also operating under different employment contracts yet managed by the same management, namely Vertex, at the Contact Centre. Moreover, secondees were earning much more than their non-secondee colleagues, yet doing the same job as them. According to several reports made by our non-secondee respondents, the friction caused by having different employment contracts has made non-secondees feel that they have an inferior employment contract compared with their colleagues who earn more due to their contract with BCC, know more due to their previous BCC experience, have more access due to their loyalty to their back-offices and yet have the same work responsibilities as their non-secondee colleagues.

“Vertex probably wouldn’t say this to you, but probably it would be easier to manage from their point of view if everybody was on the same terms and conditions. As a Manager myself, I’m sure that it creates issues if you’ve got people sat next to each other who are on totally different conditions of service.” Doug Skinner

Vertex management did try to even up the balance between secondees and non-secondees by taking away privileges like flexi-leave:

“The main perception behind all of it, I’d say, is with anyone in the Public Sector they would like to be managed by their own, by the Public Sector. Obviously there is a clash of two separate sectors. And obviously, you can quite easily see that here, Vertex could have quite easily, I suppose, adapted their policies slightly to suit the needs of the client, or to suit the needs of BCC. But, if you look at it, some of the issues like flexi-leave – which is something that Vertex don’t do, whereas BCC do have – it’s only on this site where the secondees where not given any flexi-leave. Whereas if you were working within BCC you’d have flexi-leave, so they were taking things away from them.” Afran Hussein, non secondee

The taking away of privileges such as flexi-leave did not go down well with the secondees and their psychological contracts with the Vertex management were weakened and became more of an ‘employee under-obligation’ type (Shore and Barksdale, 1998). This was a significant reason why Secondees did not want to stay at Vertex Contact Centre anymore.

There were other issues why secondees thought about leaving:

“The whole management process because it’s very hard to manage two sets of people because you’ve got BCC policies and processes and then you’ve got Vertex policies and processes. So you’ve got two people side-by-side but yet they’re on two different contracts, being managed on two different processes. One may be able to go off sick today, who might be on a BCC process, which might not be

as harsh as his colleague sitting next to him who is on a Vertex contract , who might go off sick, who would then go through the benchmarks of that policy a lot more faster.”

Afran Hussein further argues that there is a clash of contracts and policies throughout:

“Vertex’s policies are different to BCC’s. So realistically what they could have done on this side is, if they were looking at, like an amalgamated contract is having one policy, whichever it was to be, but having it signed off from both parties. So it’s having, like, a mutual agreement which really is probably what failed the whole BCC process. There was no bridge in the middle; there was a big gap, so you were either a BCC or you were a Vertex staff. But what they should have really done here is have that bridge there – and had one contract, whether it was a BCC policy or a Vertex policy, and everyone’s going by the same rules and guidelines. But when you’re looking at managing two sets of different people, on different rules and different guidelines, obviously that has an impact on the floor.”

Afran Hussein, Team Manager Vertex Contact Centre

Afran Hussein further reports sub-cultural gaps between secondees and non-secondees:

“It does cause friction between the secondee and a non-secondee because, obviously, that’s again ... that’s splitting them up and again it’s a contract like this where you’ve got an outsourcing organisation you need to have all of that inter-linked, you have to have one operation, or the one system, and you want to try and keep everything as single as possible, not having separate rules and regulations for one individual, something separate for somebody else, you need to have them all bridged off and all inter-linked.”

According to Afran Hussein not only was there a clash of two contracts but also a clash of two different cultures, namely public sector and private sector. *“Again I think any kind of issues where you’ve got a clash of two contracts, or you’ve got the simpler clashes of Public Sector and the Private Sector.” Afran Hussein*

However, BCC had a perception of Vertex being more knowledgeable than really was the case. They did not see the culture gap as being a big issue before signing the contract with them.

Vertex's perspective is discussed by Afran Hussein. According to him the intention of Vertex was to bridge the cultural gap between secondees and non-secondees:

"We've always wanted to have access to the systems and train all of our staff to give them all that knowledge that our secondees are going to have. We've always known that secondees will always move on within the Council because opportunities within the Council are a lot more greater, and again the benefits within the Council, or any Public Services, are always going to be higher than the Private Sector. So we've always known that the secondees, at some stage, would, one-by-one, leave the contract anyway, because they were unhappy on-site. Taking that into account it's been if you want to look at it from the BCC side of it, we've had a lot of barriers put in place where we were unable to bridge those gaps."

The above mentioned cultural gaps were due to a lack of creative abrasion and a mutual perspective which had its roots at senior management level (Leonard Barton, 1995; Boland Tenkasi, 1996). The conflict and lack of mutual perspective between Tony Glew and Sarah Wood trickled down also to back-office (departmental) level. The stakeholders at the back-offices were not content with merely getting calls answered. They also wanted quality to be delivered to the public. The back-offices seemed to be in line with Tony Glew's system integration perspective.

According to Nonaka, (1994) knowledge intensive firms, competitive advantage and product success are a result of collaborative, ongoing learning. Success depends not only on how effectively the diverse individuals are able to organise and develop their unique knowledge competencies but also how they can integrate and utilize their distinctive knowledge both effectively and synergistically (Nonaka, 1994). The synergy can be obtained if the aids/barriers to the knowledge sharing across the sub-cultures are understood. This synergy of integrating back-office/departmental knowledge with the

front-office using FrontLine CRM was not achieved at the Vertex managed Contact Centre. This was due to the fact that aids and barriers were not fully understood by the stakeholders involved.

Afran Hussein concludes:

"Myself, I just wish that Vertex probably could have amalgamated this, like a core contract, where the BCC employees were happy and Vertex employees as well."

The contract was not amalgamated and as per the end of 2004 most of the secondees had already left the Vertex managed Contact Centre.

5.3.6.4 End-users at Vertex managed Contact Centre also express their frustration

Respondents claim that they are not well informed, involved and equipped for new ideas and changes made at the Contact Centre.

"No I'm not. I think we should be more informed. I think it should be as you ... as when a new theory or the new things that they're bringing on ... they should, I suppose, not just ... they should roll it out to us over a longer period and not expect and give people a chance to take on the idea. I think they give you something they come up with a new idea and they expect us to take it on straight away, and not enough training is given, or not enough time to get to understand and digest it and know what it really means, is given to us. We hear these new things 'pathways'. We don't know what they mean, they're just names now and we don't know what they actually ... what is the theory behind it. So I think they should be more in-depth." Maxine Williams, non-secondee

Lack of end-user involvement has resulted in lack of trust among the end-users towards FrontLine CRM and Vertex management (Janssens et al., 2003). Moreover, management pressure on end-users, employing power based relationships has resulted in 'employee under-obligation' types of psychological contracts between the end-users and Vertex management. The FrontLine system is nominally in charge at the Vertex managed Contact Centre; end-users are obliged to use the system to

help the customers. When asked about who was in control Adam Jones a non-secondee end-user reports that:

“The system is because everyone wants to get their bonuses and things so we have to do it.”

There are other issues with the system which put extra pressure on the end-users:

“Well sometimes my system runs really slow and I’ve got someone on-line waiting whilst I’m saying, ‘Well I’m watching this little blue line go across the page, so just bear with me’. I know that it’s just the backing system or whatever they say ‘that’s booting’. So it just runs really slow, so that’s an inhibitor in that it prevents me from dealing with that caller effectively, well quickly, and getting them off the line which is what they want.” Maxine Williams, non-secondee

Maxine Williams (non-secondee) further argues that there are more people at Vertex Contact Centre but less quality. Management support was better in the back-office according to Pamela Libust (secondee). She claims that the services provided by her at the back-office had more quality. She states the reason as follows:

“Yes it was, much better by management because they had more time to look after the staff, to see what the staff was doing, this is a more vast scale than when we had before. Although we had less people we had better quality people, which gave a better quality service.”

Staff retention continues to be an issue at all levels including the Vertex managed Contact Centre.

There is a continuous change of management at Vertex, which has further added to the pressures on the end-users at the Contact Centre. According to Pamela Libust, a secondee:

“We have new management now, which is the third one since I’ve been here, and it proves there’s something wrong at the top – to have three different managers to run this ship and they keep on

sacking this captain. Who's the next one? Do we believe? We've heard it all before. Are we going to believe this one? That is the question! Back to the question that you asked me ... do I think it's going to be ... it has to get worse before it gets better."

Pamela Libust suggests that secondees would have potentially stayed if they were given a higher status than their non-secondee colleagues:

"How the people work – the management team – how they deal with crisis, how they promote people off the floor, how they deal with staff pay. That's the biggest issue really, staff pay. They need to try and hold down the staff so they don't get such a high turnover of people leaving, so they've come a long way. They need more experience. They needed to have kept a lot of the experienced people from Birmingham City Council in like a role, a higher role than what they're doing now, because then the knowledge would have stayed here, but they have still got Head Office to fall back on."

According to Pamela Libust, Vertex management has limited interaction with the end-users:

"The managers need to come from behind their computers and they need to do a lot more floor walking. They need to talk to the staff more. They need to keep their promises. They need to do their one-to-one which they promised. Don't start something that you're not going to finish!"

Pamela Libust claims that management don't tend to keep their promises:

"An example, we are supposed to have one-to-one's each month, we're supposed to have coaching side-by-side each week, we're supposed to, what we call 'qualitest' on each staff, each month, and if you go out there and ask, ask three people, 'When was the last time you had a call quality ??', they will say, (it's certain teams – I'm not speaking about every team) 'Six months ago' ... ' two months ago' ... or 'The other day'. They need to keep their promise because that's what Vertex always said that they would do – so they have us in these meetings and meetings and meetings, all about a meeting about a meeting, and nothing is being done. Every time they say this is going to happen it doesn't

happen. They've brought in trouble-shooters to sort out what is the problem here. Why is it not working – why is it working at other complexes and it's not working at this complex? These trouble-shooters were supposed to do A, B and C – we're still waiting to see A, B and C."

The trouble shooters were told that they should start with the management according to Maxine Williams:

"Well they came in to see where the problem lies, they had us in a group and they asked us questions about where we thought the problem was. We said, 'Well don't start with us, start with the management, because it starts from management and filters down into your staff. So if you haven't got someone steering the car then the car will go all over the place, so therefore you start with the steering and then work on the wheels, and then the engine, and the seats and the seat-belts.' So therefore they promised this is what's going to happen as from now. As far as this is concerned nothing has happened because on top of that a few more other staff have left. The environment that you work in has improved. It looks better out there, but they've had a 2% rise, full-stop."

Maxine Williams thinks that interaction through the meetings with the management has not been able to solve the issues:

"It's fine to have that meeting, but if we've come to a meeting to resolve a problem and we leave that meeting with the ideal – how we are going to resolve that problem – and we put a target on it, which it's supposed to have, we're coming back a month later to resolve the same problem. Then nobody took heed it what was said in the first meeting – because when you left that meeting that problem should have been solved. And now we're back in a second meeting, about the first meeting, that should have been resolved within that month so there's something wrong, that is what I'm saying."

The above are examples of disappointments expressed by end-users regarding Vertex management. Our respondents were clearly dissatisfied with their job situation at the Vertex managed Contact

Centre. They lacked management support and felt excluded from decision making processes. The above examples highlight lack of loyalty towards the Vertex management. An 'employee under-obligation' type of psychological contract resulted, as neither secondees nor non-secondees felt adequately rewarded either intrinsically or extrinsically by the management (Janssens et al., 2003; Shore and Barksdale, 1998). Vertex management on the other hand has staff retention issues and have their third manager in place in less than three years. However, they have started to use the secondees in training non-secondees more effectively – but they are running short of secondees who continue streaming back to BCC.

Krogh et al. (2000) describe how effective knowledge creation depends on the physical, virtual and emotional context of an organisation. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. Between Vertex management and secondees there was a lack of reciprocity of relationship. Secondees felt their potential was being exploited without any reward from the management. This resulted in lack of trust and loyalty between secondees and Vertex management. Secondees also felt exploited by their non-seconded colleagues who were interested in the non-codified knowledge their seconded colleagues possessed.

There was also friction between secondees and non-secondees due to the fact that secondees were governed under a better employment contract. Thus there was a lack of trust and lack of reciprocity between the secondees, non-secondees and Vertex management. Lack of loyal and 'mutual high-obligations' types of psychological contracts have restricted the non-codified or tacit knowledge sharing between secondees and non-secondees. The sharing of 'tricks of the trade' even though encouraged by Vertex management, did not take place due to lack of reciprocity between secondees and non-secondees (Krogh et al., 2000). Secondees had in addition a strong bond with the BCC back-office and an underlying loyalty to BCC based on perceived benefits. We summarise this dilemma at Vertex Contact Centre graphically with the help of the diagram below.

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5.3.6.5 The dilemma at Vertex Contact Centre involving secondees, non-secondees and the Vertex management

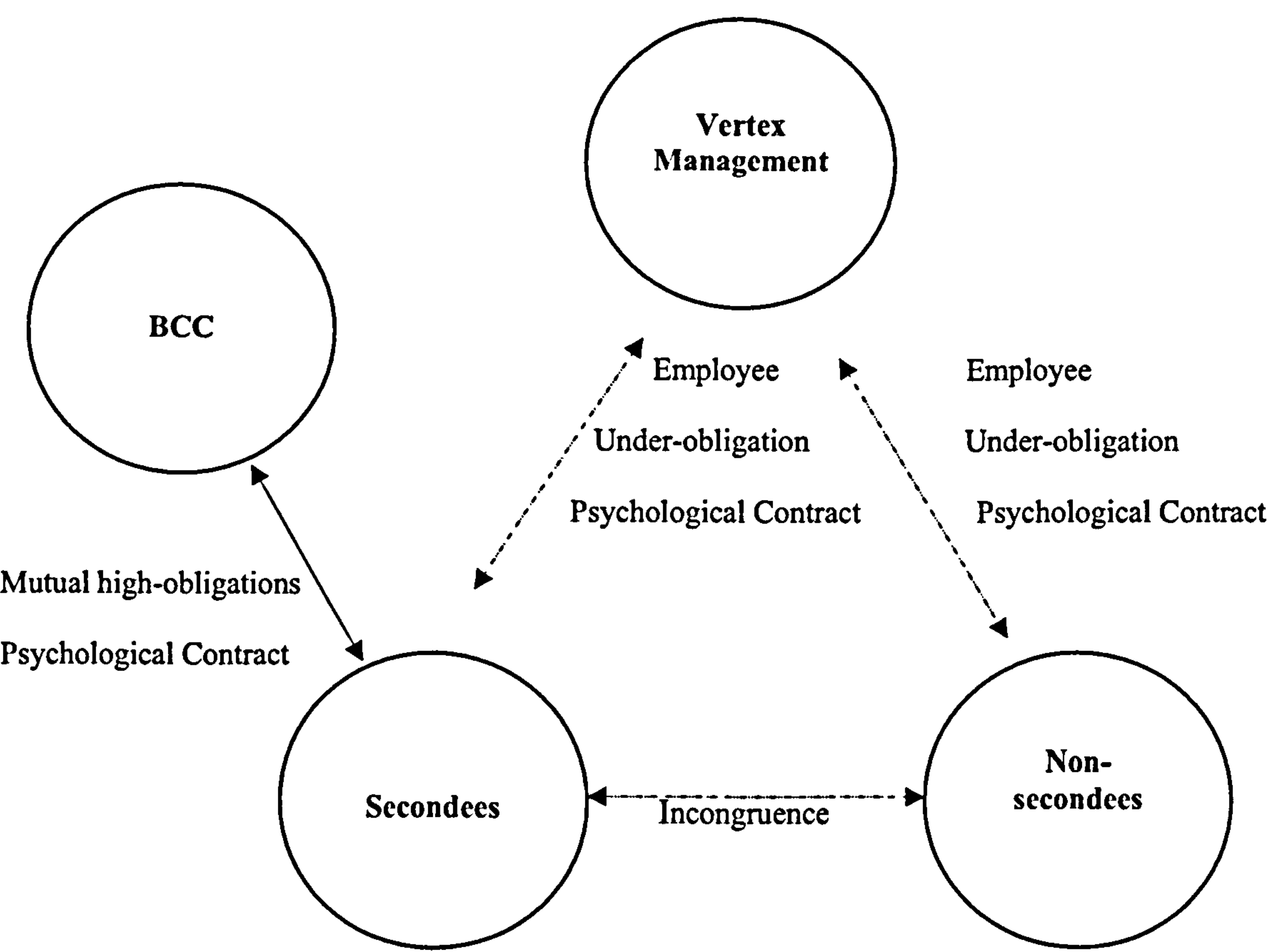


Figure 5.5 The dilemma at Vertex Contact Centre involving secondees, non-secondees and the Vertex management

5.3.6.5.1 Secondees

- Secondees show lack of trust and loyalty towards Vertex Management. They feel that they are not well informed about updates and are excluded from the decision making process.
- Secondees also feel that their knowledge is being exploited without any extrinsic reward.
- They claim that although the Contact Centre has more people than the back-office, nevertheless the quality of service is comparatively low.
- Secondees claim that management support was better in the back-office at BCC. They show a lack of trust in the Vertex management.
- Secondees are moving back to BCC and taking with them the non-codified knowledge /the ‘tricks of the trade’.

5.3.6.5.2 *Vertex Management*

- Vertex management has tried to bridge the gap between secondees and their non-secondee colleagues by taking away the formers' privileges such as flexi-leave.
- Management has also made efforts to exploit the 'tricks of the trade' possessed by secondees by using them as trainers. However this has happened belatedly as the secondees were starting to leave Vertex.
- Moreover there was no extrinsic reward in terms of bonus or anything like that attached to the training provided by secondees.

5.3.6.5.3 *Non-secondees*

- Non-secondees feel inferior to their colleagues secondees who have full access to their back-office systems.
- They feel that they lack management support and that management interaction with them is limited.
- They also express their concern regarding training and claim that they are not well informed.
- They feel stressed by the fact that they have to answer the calls as quickly as possible. However they feel that this reduces the quality of service delivery to the customers.
- They claim that secondees would have stayed if they were offered a better position and status.
- Non-secondees would like to have full access to the back-office systems and also acquire the knowledge possessed by the secondees.

5.3.7 Interdependence between Psychological Contracts, Sub-cultures and Knowledge Sharing

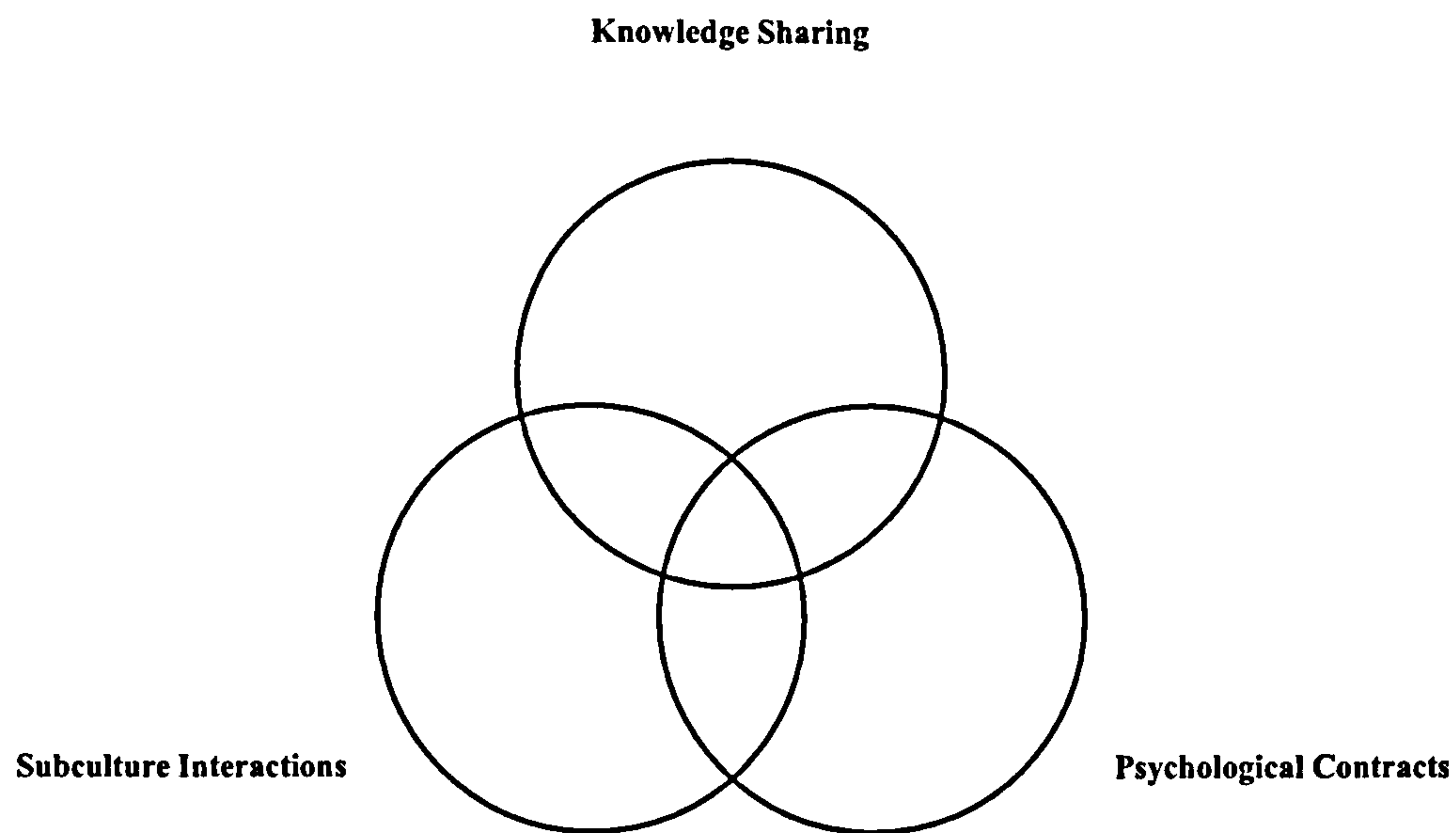


Figure 5.6 Interdependence between Subculture Interaction, Psychological Contracts and Knowledge Sharing

Under this section we will discuss the interdependence between subculture interactions, knowledge sharing and psychological contracts at BCC. A special focus is given to the sharing of non-codified knowledge in the form of the ‘tricks of the trade’.

Below we discuss the sub-cultures at different levels and how they impinged on one another affecting the whole process of CRM FrontLine development.

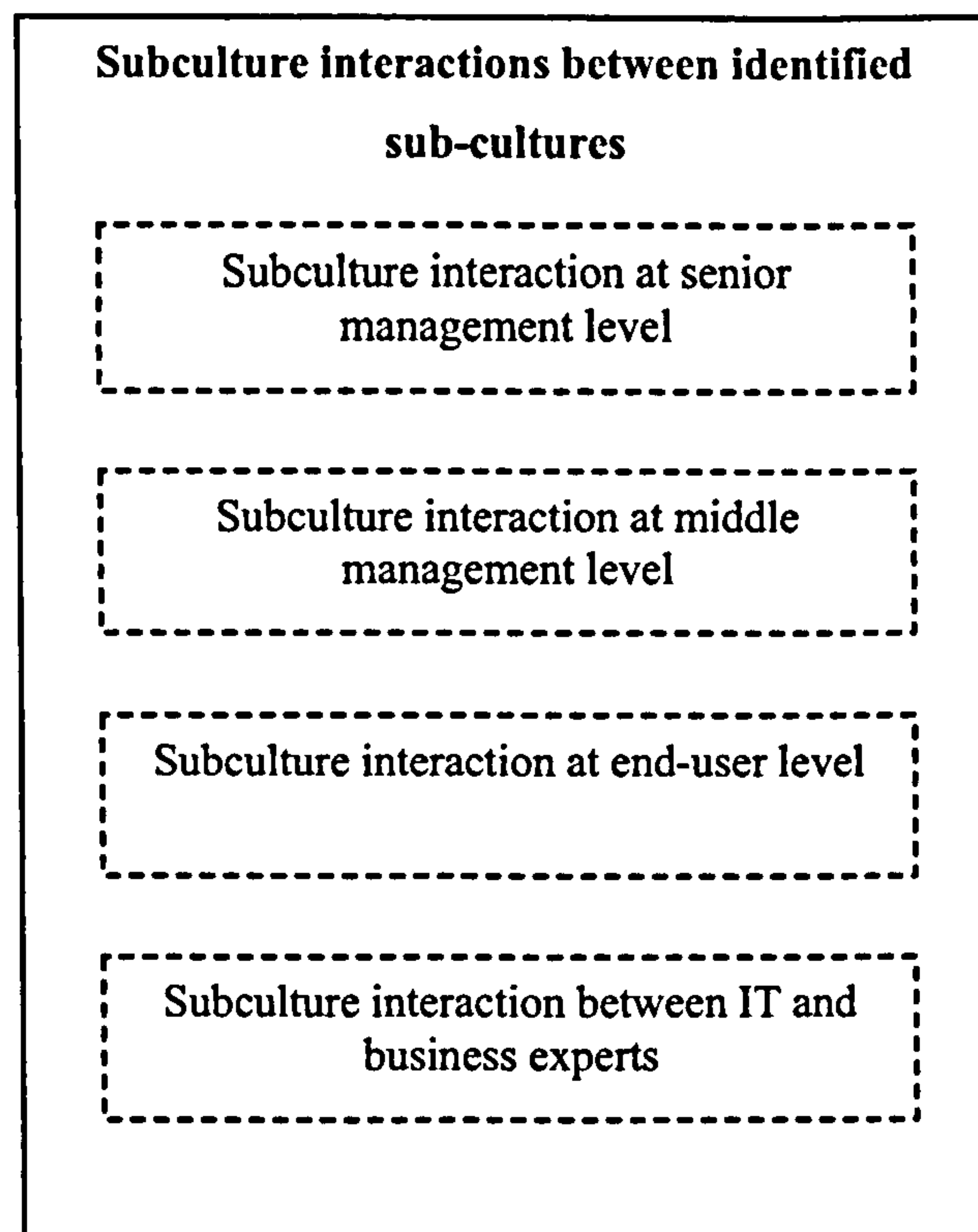


Figure 5.7 Subculture interactions at various levels of hierarchy

5.3.7.1 Subculture interaction at senior management level

There were two groups at the senior level. One supporting Tony Glew's integration strategy and the other supporting Sarah Wood's call answering focus strategy. The initial interaction between Sarah Wood and Tony Glew was not overtly problematic.

"Deputy Leader was a politician called Andy Howell who was very switched on into modern techniques. It was Andy that wanted me to do it, and Andy got me and Sarah together and said, 'Tony go and do it.' " Tony Glew

Initially Tony Glew was the driving force and the project was more IT led according to Ian Paterson. To begin with Sarah did not object to a system integration strategy. However, problems started when creative abrasion (in this case destructive) began to take place and the innermost feelings of the stakeholders were revealed. This was also a time when individual frames and perceptions regarding the technology surfaced (Orlikowski and Gash, 1994; Davidson, 2002).

“There was a lot of friction between Tony and Sarah Wood, to such a degree that, there was no communication in some instances – they were getting towards open hostility at times.” Ian Paterson

As the two senior stakeholders became more involved in discussions regarding the new technology their strategies regarding the implementation of CRM became obvious and were clearly different from each other. This resulted in a weak psychological contract, lacking in mutuality, between Sarah Wood and Tony Glew. The weak psychological contract was based on a lack of mutual perspectives from both sides. Even though a prolonged interaction took place and the two subjects became aware of each other's strategies, the 'creative abrasion' became conspicuously negative.

“My view of why Tony left: Tony left because he felt that he was being stopped doing what he needed to do to sort out IT by Sarah Wood. He didn't have the backing, the financial backing, he felt constrained and he just didn't feel that he could do the job that he was supposed to be doing.” Ian Paterson

Tony Glew, as a result resigned to escape the prolonged interactions based upon negative abrasion between him and Sarah Wood. There was some exchange of information between Sarah Wood and Tony Glew. However, the weak psychological contracts between the two lead them to shut themselves off from each other, not listening to each other actively. Both promoted their individual agendas (frames) and gathered followers to support the same.

5.3.7.2 Subculture interaction at middle management level

BCC's strategy to promote IT autonomy resulted in several software solutions, and systems were bought by each department to facilitate its departmental tasks. However, this was done without any consideration of overall system integration. The stakeholders of the systems within each department had acquired codified and non-codified knowledge over several years. This knowledge however remained in departmental silos. According to David Hall BCC have departmental vertical silos. The Corporate IT Services interact with departments sporadically without any in-depth prolonged

interaction which could facilitate creative abrasion between the Corporate Services and departments. CRM FrontLine was supposed to facilitate integration. Limited departmental involvement could not achieve cultural integration, which in turn could have assisted in establishing mutual perspective and shared understanding. This lack of departmental involvement has continued, resulting in ‘employee under-obligation’ types of psychological contracts between Corporate Services and the various departments. Knowledge sharing among the stakeholders of CRM FrontLine is poor.

According to Ian James, Head of Community Initiatives for Birmingham City Council based at Neighbourhood Office:

“We suspect they (Corporate Services) don’t want us to know, they don’t want us to have access to it (CRM FrontLine). Maybe we’ll find out something we’re not supposed to know – I don’t know.”

As a result the departments are continuing to use their departmental autonomy to promote independent systems (such as NOSS+) to cater for their needs.

“I’d reached the point where I actually thought if we could work towards either we need to have consistent CRM we may not [need] to roll out the NOSS+ system, if we’d got something else that would do the job alternatively then we would want to do that. It just seems to be now they (BCC Corporate Services) want to develop an integrated system with someone else, and in the meantime I’ve got responsibility for Neighbourhood Offices and therefore we will push for NOSS+.”

Ian James

Ian James further reports that the knowledge created in the departmental silos has not been exploited and integrated in CRM FrontLine. This is also due to a limited degree of interaction between various departments involved in the CRM initiative.

According to our respondents Ian James (Neighbourhood Services), Doug Skinner (Council Tax) and Richard Budden (Environmental Services), the information regarding call handling sent to them by Vertex managed Contact Centre lacks qualitative information.

“We just get a little bit disappointed when we’re supposed to be in partnership with people and we don’t get the impression they have been as open as they could have been in terms of letting you know that the service is suffering.” Dough Skinner, Council Tax

Richard Budden adds:

“We undertake certain systematic sampling of data that is input in relation to business issues, e.g. a missed collection that is reported: we need basic information like location, what’s been missed. And we sample, a rolling programme, 1% of all the jobs that have been input through FrontLine through to the back-office system, and there are inaccuracies or errors in over 20% of the jobs that are input. Similarly I hear, a lot of this is anecdotal, a fair number of complaints from elected members [of the City Council], members of the public who come to Council Tax complaining about the way they were dealt with and what has been said to them via the Contact Centre. So quantity, quantitatively we’ve got it right, but the quality aspect is not all working.” Richard Budden, Environmental Services

There is a lack of trust between the departments and Corporate Services. The stakeholders of CRM FrontLine are also not happy with the Vertex managed services at the Contact Centre. They would like to see more quality in the service delivery at the Contact Centre. Moreover, they would also like to see detailed qualitative information sent to them by the Vertex Contact Centre management. This, they claim would help them to have a better quality control of the services.

Knowledge sharing between the departments due to departmental silos is minimal horizontally. Also, due to a limited interaction between the senior management (Corporate Services) and departments, a mutual perspective and shared understanding regarding CRM FrontLine is missing.

There is also a lack of trust between the departments and Vertex Management.

“The Managers at Vertex I don’t know – as I say I’m on my third lot now – so you meet with them and you get the same stories about capacity planning and all the buzz words, whereas I’d just rather them get in there and try and turn the service round. But I don’t know, I haven’t got the answers for you, how they’re going to do that.” Dough Skinner, Council Tax

This in turn gives rise to suspicions and lack of trust, as was reported to us by our respondents, resulting in psychological contracts that are not mutual and are of ‘employee under-obligation’ type (Janssens et al., 2003; Rousseau, 1995; Shore and Barksdale, 1998). The lack of prolonged interaction is not the only reason for the above. All the departments we spoke to, believe in a more integrated approach regarding a CRM system. However, this cannot be achieved without integrating the sub-cultures at middle management and senior levels. At the moment the departments feel that they are not a part of the CRM initiative of their free will but are under obligation to participate in it (Shore and Barksdale, 1998). They feel that their opinions are not taken on board. Knowledge, in particularly tacit knowledge in the form of ‘tricks of the trade’ resides in departmental (horizontal) and vertical (management hierarchical) silos.

5.3.7.3 Subculture interaction at the floor level (end-user sub-cultures)

As previously discussed in this chapter there was friction between secondees and non-secondees caused by several factors. Secondees were paid more than their non-secondee colleagues and yet allocated the same roles.

The secondment agreement has been ended according to Richard Budden (Environmental Services):

“The secondment has ended, as a result of, or at the request of, I think, the secondees themselves who had a conflict of interest between what they perceived as their loyalty to Birmingham Council and the

business and Vertex, who perhaps had a different attitude and different managerial styles used in the private sector to that that they've been used to at the City Council."

Secondee loyalty lay firsthand with BCC and their back-offices. They were obliged to interact and share knowledge (explicit) with their colleagues. Latterly Vertex management started to make effective use of their tacit/non-codified knowledge whilst using them as trainers for the newcomers. However, by this time secondees had already made their minds up about going back to BCC. Moreover, secondees perceived it as exploitation of their expertise without any financial reward.

"I've been doing the supervisory role, as they call it a Technical Specialist. I've been a Technical Specialist for over one and a half years, so I've been looking after my colleagues as well as new staff. I have taken an escalated course, which is not part of my job as a CSA. I have trained all new staff that have come in, along with my colleagues, and I have set-up forum meetings. I am a forum representative as well as, so I do feel that we have been exploited because we haven't been paid for what we've been doing." Pamela Libust, secondee

Secondees delivered a high quality service using their informal connections and their invisible colleges within BCC (Kunda, 1991; Krogh et al., 2000; Vanmaanen, 1986). However they were under pressure to be quick in delivering that service due to Vertex management's call statistics monitoring. Secondees perceived Vertex management relationships with them as more of a power based type. This resulted in an 'employee under-obligation' type of psychological contract between secondees and Vertex management (Shore and Barksdale, 1998). The outcome was obvious; secondees started to leave Vertex and took with them the 'tricks of the trade' and their non-codified knowledge regarding the systems and BCC culture. This reduced the quality of service delivery at the Vertex managed Contact Centre.

"The knowledge went with the majority of my colleagues. The service level, the calls coming in, the queuing system has gone tremendously out the door because the staff here we haven't got the

quality of staff to take the calls, so the majority of time we were training and getting them up to the level that they will need to be to take calls on a faster level. The quality is non-existent, so there are a lot of errors being made. So my concept of it was that it was disorganised and it was all about quantity not quality.” Pamela Libust

Management at Vertex tried to exploit the non-codified knowledge possessed by secondees. Secondees, on the other hand, did not have a mutual type of psychological contract with the management. They perceived the relationship between them and the management as a more power based type. According to secondees their skills were exploited without an extrinsic reward in the shape of a bonus. As a result they became more convinced of the desirability of moving back to BCC. Moreover, they also felt their relationship with the Vertex management lacked reciprocity (Krogh et al., 2000).

There has been some knowledge sharing between the management and the customer service advisors at the Contact Centre. However it has been mainly of a descriptive and prescriptive nature. Descriptive knowledge is in close proximity to explicit knowledge since it describes things as they are; it can be in the form of rules, abstract concepts and general principles, and it often has a consistent and generalisable structure (Vincenti, 1993; Nonaka et al., 1995; Herschbach, 1995). Such knowledge has been shared during the training of customer service advisors at the Vertex managed Contact Centre. Furthermore, prescriptive knowledge is based on efforts to achieve greater effectiveness, such as improved operations (Vincenti, 1993). This type of knowledge has been in the form of transcripts which have been updated by the Corporate Services. As per the end of year 2004, tacit knowledge has continuously moved back to BCC as the secondees make their way back to BCC.

5.3.7.4 Subculture interaction between IT and business experts

There was initially an illusion of consensus between the groups led by Tony Glew (former Head of IT) and Sarah Wood (Director of Resources). Sarah Wood’s group claimed to have a business approach, whilst Tony Glew’s followers believed in an integrative approach. Our respondents seem to agree on

been able to achieve a shared understanding between the groups. This has resulted in weak psychological contracts lacking a mutual perspective and ‘shared context for knowing’ (Boland and Tenkasi 1996; Rousseau, 1995; Newell et al., 2002). As a result, knowledge sharing, particularly non-codified knowledge in the form of the ‘tricks of the trade’ regarding system integration have not been shared and exploited fully by BCC.

5.3.7.5 Summary highlighting subculture interactions, knowledge sharing and psychological contracts

From the beginning of their CRM initiative BCC had differing frames and ‘sense making’ of technology (Davidson, 2002; Orlikowski and Gash, 1994). Subculture interaction at different levels of hierarchies has been limited. Even when prolonged interaction has taken place it has resulted in negative abrasion. Weak psychological contracts lacking mutual perspectives and ‘shared context for knowing’ at different levels of hierarchies have emerged. This has inhibited the sharing of knowledge across the sub-cultures. There has been, nevertheless, some knowledge sharing in relation to descriptive and prescriptive knowledge at end-user level (Vincenti, 1993).

Non-codified tacit knowledge in the form of ‘tricks of the trade’ has not been mobile and remains in subculture silos (Bartlet and Goshal, 1998). The efforts made by the management at the Contact Centre to exploit the tacit knowledge possessed by the secondees and convert it into to a codified form have not paid off. This is due to the fact that secondees are making their way back to BCC and have not felt a strong mutual obligation to share their ‘tricks of the trade’. Stakeholders at senior and middle management level have also withheld their non-codified knowledge regarding an integrative approach as a result of negative abrasions. Their negative abrasion resulted in ‘mutual low-obligation’ types of psychological contracts (Shore and Barksdale, 1998). Consequently managerial stakeholders started to leave the project and took their non-codified knowledge and ‘tricks of the trade’ with them.

Throughout the development of CRM ‘Process’ subculture interaction has been present, and to some extent even in a prolonged form. However, this has not resulted in a non-codified type of knowledge

sharing. Rather, non-codified knowledge sharing has been dependent on the types of psychological contracts resulting from subculture interactions.

Stakeholders have left the project instead of being loyal to it. Tacit knowledge in the form of 'tricks of the trade' has moved with the stakeholders. In the case of Tony Glew it (tacit knowledge) went to Lagan where he got a new job and was able to use his previous knowledge regarding an integrative approach as a CRM Consultant. In the case of David Hall, it (tacit knowledge) went back to his call centre where he continues to develop an integrative strategy. As for secondees, they took their invisible colleges (their strong networks) and 'tricks of the trade' back to BCC. Their psychological contracts with the back-offices proved to be strong and of a 'mutual-obligation' type. Back-office management were very happy to receive the secondees back. The fact that secondees have thinned out and the lack of prolonged interaction between the back-office management and the Vertex management has resulted in a 'mutual under-obligation' type of psychological contract between them, which Shore and Barksdale (1998) claim is expected to attain the poorest results. Back-offices are in a process of planning alternate systems to patch up the loopholes in the service delivery at the Contact Centre. According to Ian James from neighbourhood advice:

"Earlier in the year (2004) we did some mystery customer's testing of the service. Well it was before I came back, somebody who actually now works for me as part of the Neighbourhood Offices support. And to a large degree that's borne out what I've just said. The service that's now being given is not the best of the service, which ideally we would want."

According to Ian Paterson, Vertex management has not taken many steps to monitor the quality of its service. He further thinks that the service provided by the Contact Centre is of a more generalised nature lacking the capacity to offer detailed responses to clients. He would like it to be more differentiated according to the needs at the back-offices. Raj Patel from the Council Tax claims that calls at the call centre are being abandoned prematurely:

“I can see the call abandoned – I can see that happening anyway. Yes I can see calls abandoned because they’re not being answered quickly enough, and then, obviously, the calls answered are getting quicker because there’s not as many calls coming through, do you see what I mean.”

These examples show the background to a weak, ‘employee under-obligation’ type of psychological contract between back-offices and the Vertex management. Management at the back-offices according to Richard Budden (environmental services) would rather have their own systems and call centres with a virtual integration link between the departments. They would also prefer to have an IVR (Interactive Voice Response) rather than ACD (Automated Call Distribution). When the ACD distributes an incoming complex type of call to the next available customer service advisor, and if that advisor is a newly appointed non-secondee with a limited knowledge of back-office culture and procedures, then the quality starts to suffer as a result. This is the reason why back-offices would like to see a differentiated and sophisticated service being provided at the Contact Centre.

However as their comments have not been taken on board, the back-offices’ psychological contracts with both Vertex and Corporate Resources Management have become weaker and of ‘employee under-obligation’ type. As a result they continue to pursue a non-integrative approach in developing new processes to improve their services. This acts as a barrier to the fulfilment of BCC’s aim to establish a ‘one-stop-service’ for their customers thus meeting the latest government directives regarding e-government. Knowledge sharing, particularly non-codified knowledge sharing, has become minimal between the groups. For an overview of our analysis see figure 5.8.

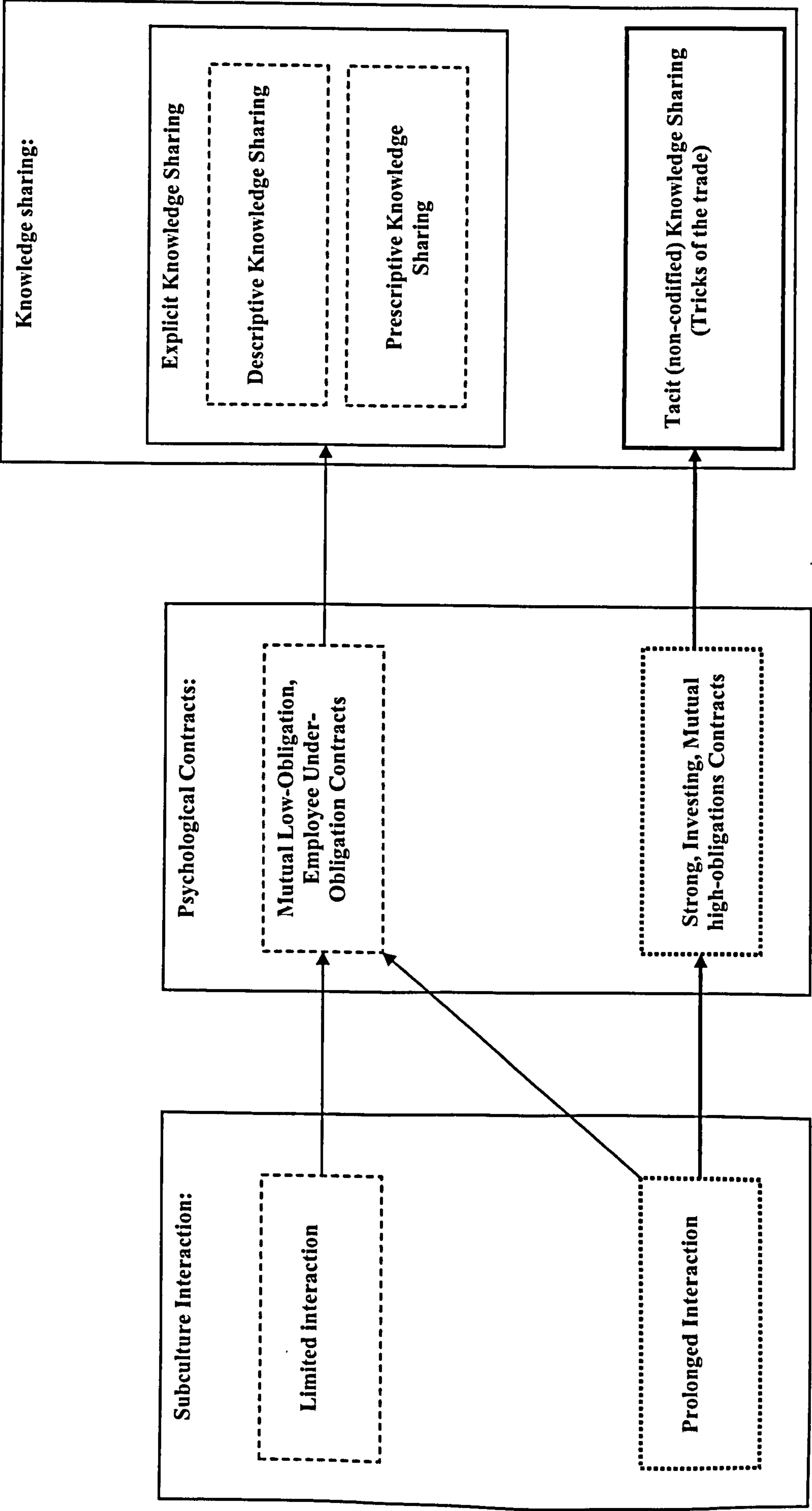


Figure 5.8 Interdependence between subculture interactions, psychological contracts and knowledge sharing, showing Psychological Contracts playing a key role in sharing of 'tricks of the trade'

5.4 Conclusion BCC CRM FrontLine Implementation

5.4.1 Summary

This research set out to investigate the CRM implementation at Birmingham City Council (BCC). The research focused on the implementation of CRM Frontline at BCC. Case research methods were applied as the CRM application was still in a formative stage, and the experiences of subjects and their perceptions thus becomes vital (Benbasat et al., 1987). In particular we wished to investigate the relatively neglected issues relating to knowledge management and sharing, and psychological contracts. Case research through interviewing and participant observation seemed particularly appropriate.

The research was structured firstly to describe the key events and subsequently to discuss the ‘how’ and ‘why’ questions relating to those events in terms of an exploratory analysis. We have included some preliminary analysis already in structuring the case history. Theories and learning from the relevant literatures were applied to enhance the understanding of the CRM system and its implementation at BCC.

In the final analysis section an improvised framework resulting from a refined literature review was adopted to structure, analyse and explain events and evidence longitudinally (Pettigrew, 1985; Willcocks and Margetts, 1994). The salient features that emerged from the literature review were used as a lens to focus on knowledge sharing issues linked with psychological contracts for final data analysis (Pettigrew, 1985; Willcocks and Margetts, 1994; Davidson, 2002; Orlikowski and Gash, 1991, 1994). The improvised framework adapted from Pettigrew’s model (1985, 1991) contributed to developing a deeper insight into the contemporary situation and to understanding the phenomena at the research site.

As per November 2004, BCC CRM implementation was at the adaptation and acceptance stage during which they were trying to develop systems to promote integration, and streamline the processes as

much as possible. The impact of knowledge creation, retention and exploitation on the ongoing process of implementation has become highly important to the organisation.

How knowledge, in particular tacit knowledge, is shared and exploited has been addressed in this chapter. The chapter has aided the discussion of the ‘tricks of the trade’ – the short cuts and work-arounds that are born in the minds of the end-users of the system, their hands-on skills, including best practices and special know-how (Vincenti, 1984; Polanyi, 1973; Orlikowski W.J. and Iacono S., 2001).

The discussion has concluded that in order to understand the above, one needs to understand the micro-elements (psychological contracts in our project) in the process of mutual perspective formation (Boland and Tenkasi, 1996) which facilitate tacit knowledge sharing. Scholars argue that tacit knowledge sharing is dependent on prolonged interactions resulting in a creative abrasion type of environment where innermost feelings are revealed (Leonard-Barton, 1995). However this research has highlighted the fact that a prolonged interaction does not necessarily result in a creative abrasion which was clearly the case at BCC senior management level. In this case a prolonged interaction resulted in progressively destructive abrasion leading to a weak ‘mutual low-obligation’ type of psychological contract. This scenario was repeated at every level in the hierarchy.

In the above case some knowledge was shared, it was however, largely of descriptive and prescriptive nature. This research suggests in particular that tacit knowledge sharing (in our research ‘tricks of the trade’) is largely dependant on a strong, investing and ‘mutual high-obligations’ type of psychological contract.

Throughout this research the micro-elements (the psychological contracts in this research) leading to ‘mutual perspective taking’ were investigated and critically analysed. This enhanced our understanding of how the ‘tricks of the trade’, the shortcuts, and work-arounds surface, and how they are shared across the sub-cultures, individuals and groups. We drew attention to the impact of psychological contracts on non-codified knowledge sharing, recognising the inhibiting effects of

‘mutual low-obligation’ and ‘employee under-obligation’ types of psychological contracts resulting in knowledge hoarding and the formation of knowledge silos, both horizontally and vertically.

5.4.2 Emerging Issues

In many ways the case history demonstrates not only the importance of previously neglected areas of knowledge sharing and psychological factors in systems implementation, but in particular how lack of knowledge sharing, failure of non-codified/tacit knowledge sharing, and unconnected psychological contracts can inhibit systems implementation.

Applying a longitudinal research approach also reveals the origins of these sub-optimal outcomes – at least sub-optimal from systems promoter, external customer and governmental stakeholder perspectives. Referring to figure 5.9, the origins can be traced from the historical decision to give departments autonomy over IT decisions and purchasing. This resulted in the functional hierarchical structure of the organization developing both vertical and horizontal stratification in knowledge possession and psychological loyalties (invisible colleges) at every level. Outsourcing brought into play further differential knowledge bases and psychological contracts without sufficiently addressing the need to dissolve the resulting barriers to knowledge sharing, learning and mutual perspective-taking.

These fissures in organization led to the development of sub-cultures, each embodying differing perceptions, interests, loyalties and objectives. In such circumstances politics breed, and become particularly visible in times of technological change (Pettigrew, 1985; Willcocks et al., 2002), and, as the case shows, during the development and implementation of a key system such as CRM. At the same time external contextual pressures forced organizational stakeholders into action, with one group clustered around the Strategic Director and Business Manager with what we have called a ‘call-answering’ focus, winning over against the integration approach favoured by the Head of IT, and for the support of which the vendor Lagan had been originally selected.

In terms of the internal context we identified many examples of knowledge hoarding in vertical silos and of 'mutual low-obligation' types of psychological contracts resulting in subsequent non-cooperative, and less informed patterns of behaviour relative to systems implementation. All this made the process of systems implementation much more difficult than it could have been had the issues of knowledge sharing and enhancement, and shared psychological contracts been addressed through, for example, training and education, team-building, better communication and changed ways of working.

The process of change revealed real knowledge and psychological contractual issues. The project team at BCC went through its ups and downs. The CRM program manager resigned soon after the new business manager's arrival. More people left, including the chief executive and the head of IT services as a result of a power struggle and conflicts (Jehn, 1995). Frequent changes of personnel may not have allowed the group to attain cohesiveness thus contributing to a less productive output (Kirkman and Shapiro, 1997). BCC re-aligned their strategy and moved back from a complete integration approach to having a call answering system with limited integration. These events can be related to knowledge and psychological contractual issues.

Knowledge silos found at BCC were at different hierarchical levels. At senior management level the sub-cultural gap between Sarah Wood's team and Tony Glew's created a divide. The divide continued with David Hall being replaced with a new business manager. Due to a lack of 'mutual perspective taking' and 'shared understanding' the psychological contracts were more imposed and 'mutual low-obligation' rather than 'mutual high-obligations' in type (Shore and Barksdale, 1998). This inhibited the process of developing positive creative abrasion, thus resulting in knowledge hoarding in the silos.

This research suggests that psychological contracts play an important role in knowledge sharing. It also suggests that imposed psychological contracts (employee under-obligation) tend to promote power based relationships (shore and Barksdale, 1998). Explicit elements of psychological contracts between senior management and end-users include a sense of obligation to work, and job security. Importantly, implicit elements of psychological contracts remain hidden (Makin et al., 1996)

producing illusions of consensus, which influence and inhibit adoption and acceptance of the CRM system.

5.4.3 Outcomes

In this particular systems implementation it is particularly interesting to look at what happened where the 'Process' issues as listed in figure 5.9 were not addressed. Knowledge sharing and development were delayed because of low staff retention, imposed, weak, 'mutual low-obligation' and 'employee under-obligation' types of psychological contracts, low user involvement in the process of change, lack of external user involvement, declining senior management commitment, and limited user training. As Willcocks et al. (2002) and Walton (1989) have shown, these insufficiencies had knock-on effects in terms of the final outcomes.

BCC lost control of the end to end process. Two sets of management were involved (Corporate Services and Vertex Management) in many transactions, leading to confusion over responsibility and service level achievement. The provision of another layer (Vertex) between the BCC authority and the public may also have led to a perception of reduced accountability.

The system went live a year after the contract was signed with the vendor. Lagan (manufacturer of CRM Frontline) also brought in Cavendish (another vendor) to help with the integration of the back-office systems. Subsequently BCC outsourced their call centre management to Vertex. The consequences of outsourcing included stakeholders resigning from the project and secondees / non-secondees relationship issues.

The outcomes from the case are summarised in figure 5.9. Management support at senior management level was provided for the project. The support however thinned out as secondees at BCC started to leave. In addition the training seems to have been rushed at the Contact Centre. This was done without taking into account BCC culture and its expectations. The initial motive behind bringing in the CRM system at BCC was to get the calls answered.

Subsequent user commitment was effected by a lack of involvement in the decision making process in buying the system initially. Decisions to buy the systems were taken at a senior management level. End-users involvement in the implementation process came at a later stage. No external user involvement was taken into consideration.

User commitment was linked predominantly with imposed, 'employee under-obligation' types of psychological contracts and power based relationships (Rousseau, 1995). At BCC users have subsequently found work-arounds in the form of manual methods to answer a call rather than using the CRM FrontLine system. However, they do end up using the system in order to meet the job requirement. Users have not been able to see the shared benefits fully yet and hence the psychological contracts are not of 'mutual high-obligations' type (Shore and Barksdale, 1998).

User commitment has potential links with job security (Davenport et al., 1998). 'Mutual perspective taking' has not fully happened due to the secondee/ non-secondee relationship situation at BCC (Boland and Tenkasi, 1996). Furthermore, the content of an apparently mutual perspective may not have been allowed to surface or be challenged thus avoiding any interpretations which could shake up the illusion of consensus between stakeholders of the system (Prusak, 1998). As the project progressed and the innermost feelings were exposed, people started to leave the project. The achievement of a new definition of the situation in which all participants can share has yet (as of Nov-2004) to take place in its full capacity at BCC (Habermas, 1979).

Partly as a consequence of these factors, staff turnover at the floor level has been very high. This does not allow staff interactions to come to a state of 'mutual perspective taking' where shared learning leading to 'mutual high-obligation' types of psychological contracts can take place (Boland and Tenkasi (1996). At the Vertex managed Contact Centre, the staff, in particular non-secondees do not interact on prolonged basis with the back-offices (departments). The secondees felt excluded at The Contact Centre. Furthermore, their (secondees') contract with BCC did not allow them to be upgraded

to a higher position. Non-secondees on the other hand could get promoted. Relationships at the contact centre between the secondees and the outsourced management were more power-based in style. This resulted in a scenario where BCC secondees with a lot of experience and BCC cultural knowledge felt inferior to their non-seconded colleagues. The high turnover of staff at senior level at BCC has not helped the project to get stabilised or the new staff to settle either. The resulting psychological contracts are more of an imposed than a 'mutual high-obligations' type (Shore and Barksdale, 1998). The 'creative abrasion' that could facilitate the development of 'mutual high-obligations' types of psychological contracts to help in sharing of 'tricks of the trade', did not take place. Stakeholders at different levels of hierarchy interacted with each other from within their silos and the sharing of non-codified knowledge has tended to remain limited to the silos.

The micro mechanisms, (in this research the psychological contracts, underlying the development of 'mutual perspective', 'shared mental space', 'T-shaped skills' and 'knowing of what others know') upon investigation have shown to play a key role in sharing of 'tricks of the trade' and work-arounds across the sub-cultures of a post CRM implementation environment.

Wherever the psychological contracts were weak, as a result of lack of sharing of individual frames, and sense making of technology, knowledge sharing, particularly the tacit knowledge sharing (in form of 'tricks of the trade') suffered greatly (Davidson, 2002; Orlikowski and Gash, 1994). People chose to leave the project. Moreover, secondees had full access to the back-office systems due to their trustful and loyal relationships (invisible colleges) with the back-office management. Secondees were also able to take advantage of their BCC cultural knowledge and invisible colleges in order to deliver a high quality service to the customers. 'Tricks of the trade' were shared through invisible colleges as a result of reciprocating 'mutual-employee obligation' types of psychological contracts between the secondees and the back-offices. Secondees were given full access to the back-office systems due to their strong investing psychological contracts with the back-office management (Janssens et al., 2003). By the end of year 2004 BCC CRM project was at adaptation and acceptance stage where BCC were trying to develop the system further, promoting integration, and streamlining the processes as much as

possible. The impact of knowledge creation, retention and exploitation on the ongoing process of implementation has become of high importance to the organisational promoters of CRM, as is the building of improved psychological contracts based on of the system. However, this has proven to be very difficult as the errors made by the optimal utilization management initially have resulted in 'employee under-obligation' types of psychological contracts. As a result staff retention, particularly knowledgeable staff retention (secondees), has become an issue. According to our respondent Trisha Thrupp (CRM Project Manager) CRM Frontline project is a ship no one wants to stay on. The quality of service delivery has suffered as a result of secondees moving back to BCC. Management has become aware of the need of system integration over time and is slowly moving towards it. However, their understanding regarding the relationship between system integration and cultural integration still remains limited. BCC CRM project has been more focussed on call answering rather than call handling.

The research here has sought to extend the analysis of IT implementation to CRM systems, and to include in that analysis, knowledge issues – including tacit knowledge sharing, knowledge silos, psychological contracts. A longitudinal approach has elicited how contextual, cultural, political and structural factors have influenced propensity to share knowledge and pursue common cause in the CRM implementation and use at Birmingham City Council, and the factors that could alleviate knowledge bottlenecks and facilitate more optimal utilization of the system. Our research has confirmed what our initial reading of the literature led us to believe – that knowledge issues, and what constructs them, are not just implicit in all systems implementations, but can be key reasons why a system optimises or fails in the light of its different stakeholders' interests. Our investigation of subculture interaction has shown that a prolonged interaction in some cases can result in a negative type of abrasion resulting in 'mutual low-obligation' types of psychological contracts. This in turn acts as an inhibitor in the sharing of particularly the non-codified knowledge. The research concludes that micro elements such as psychological contracts play a key role in the sharing of tacit/non-codified ('tricks of the trade' in our research) knowledge.

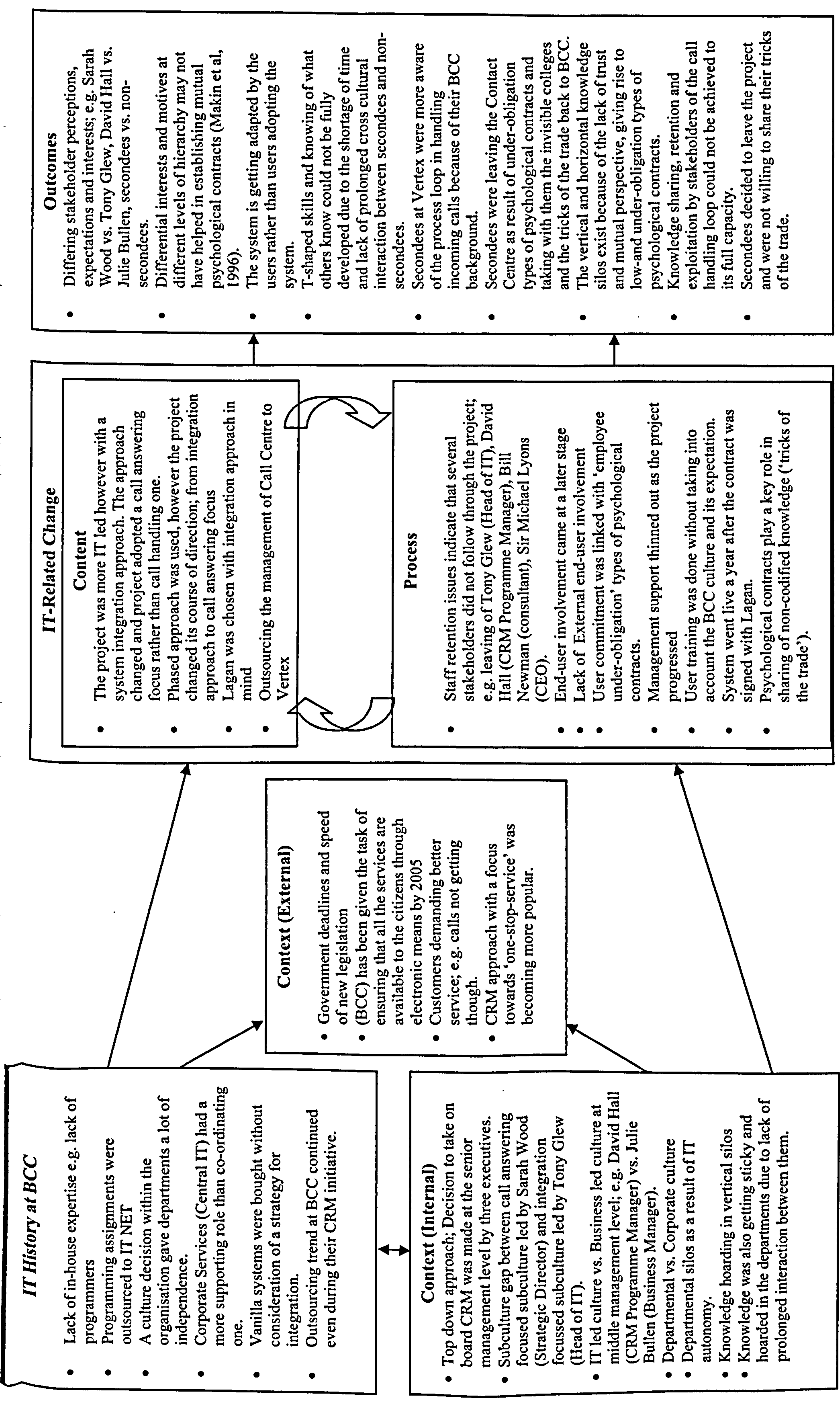


Figure 5.9 Summary of The Analysis Using Pettigrew (1985, 1990) & Willcocks and Margetts (1994)

Chapter Six

Case Study Two

6.0 Case Study IBM

6.1 Introduction

This chapter presents the chronological description for the period 1999-2004 with a thematic account of IBM’s initiative to deploy a CRM Solution to promote system integration. It uses the previously stated analytical framework to go into detail and discusses the history, context and content in an interpretive narrative initially (in Part 1). It then uses the ‘Process’ part of the framework to carry out a within-case analysis of the implementation and post-implementation environment at IBM in Part 2. The chapter also provides an end summary.

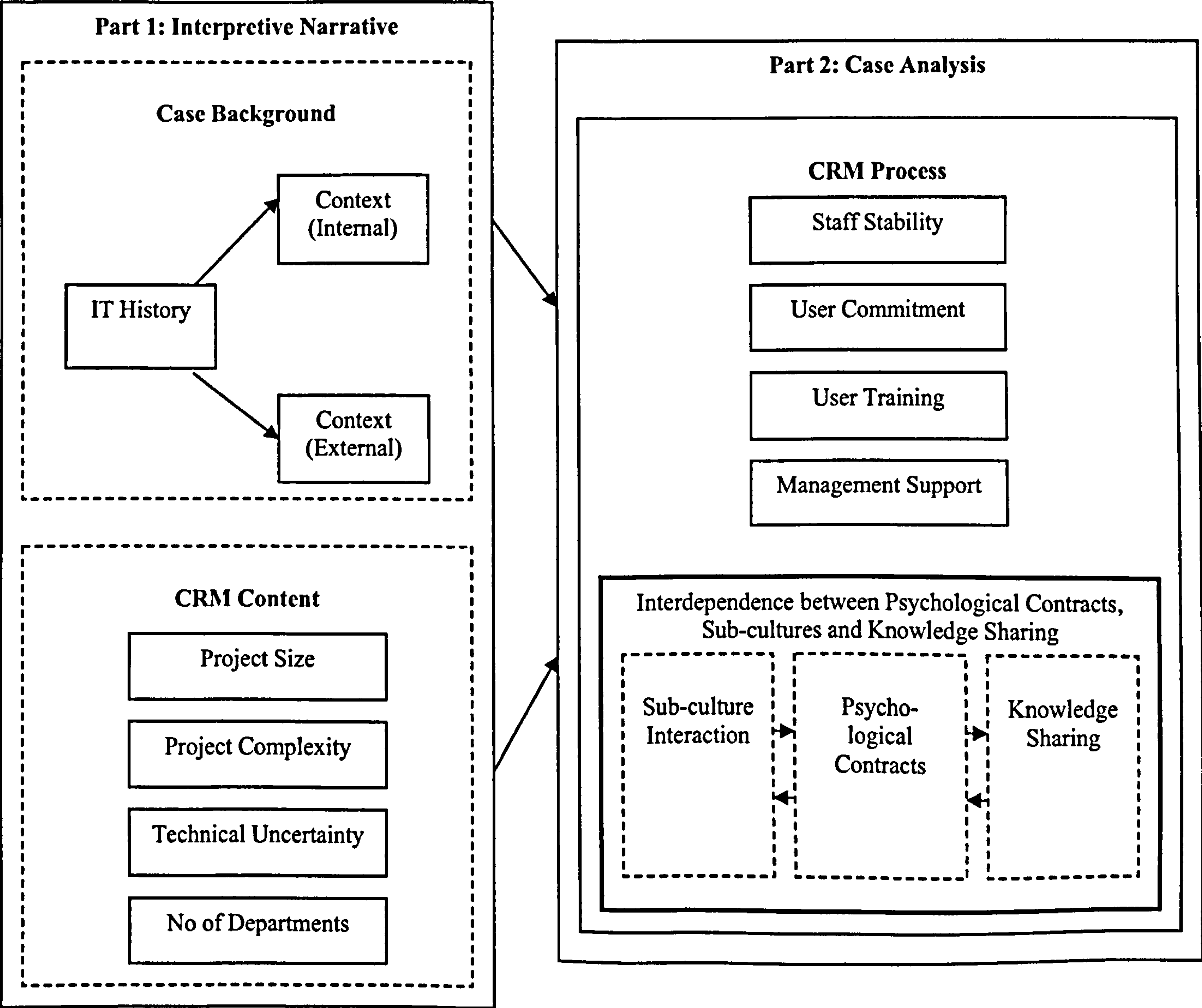


Figure 6.1 Framework for the final data collection and analyses

The framework adopted from Pettigrew's (1985, 1990) six categories model continues to contribute to the development of a deeper insight into the contemporary situation and understanding the phenomena at our research sites.

6.2 IBM CRM Siebel Implementation – 1999-2004

6.2.1 Part 1 – Interpretive narrative

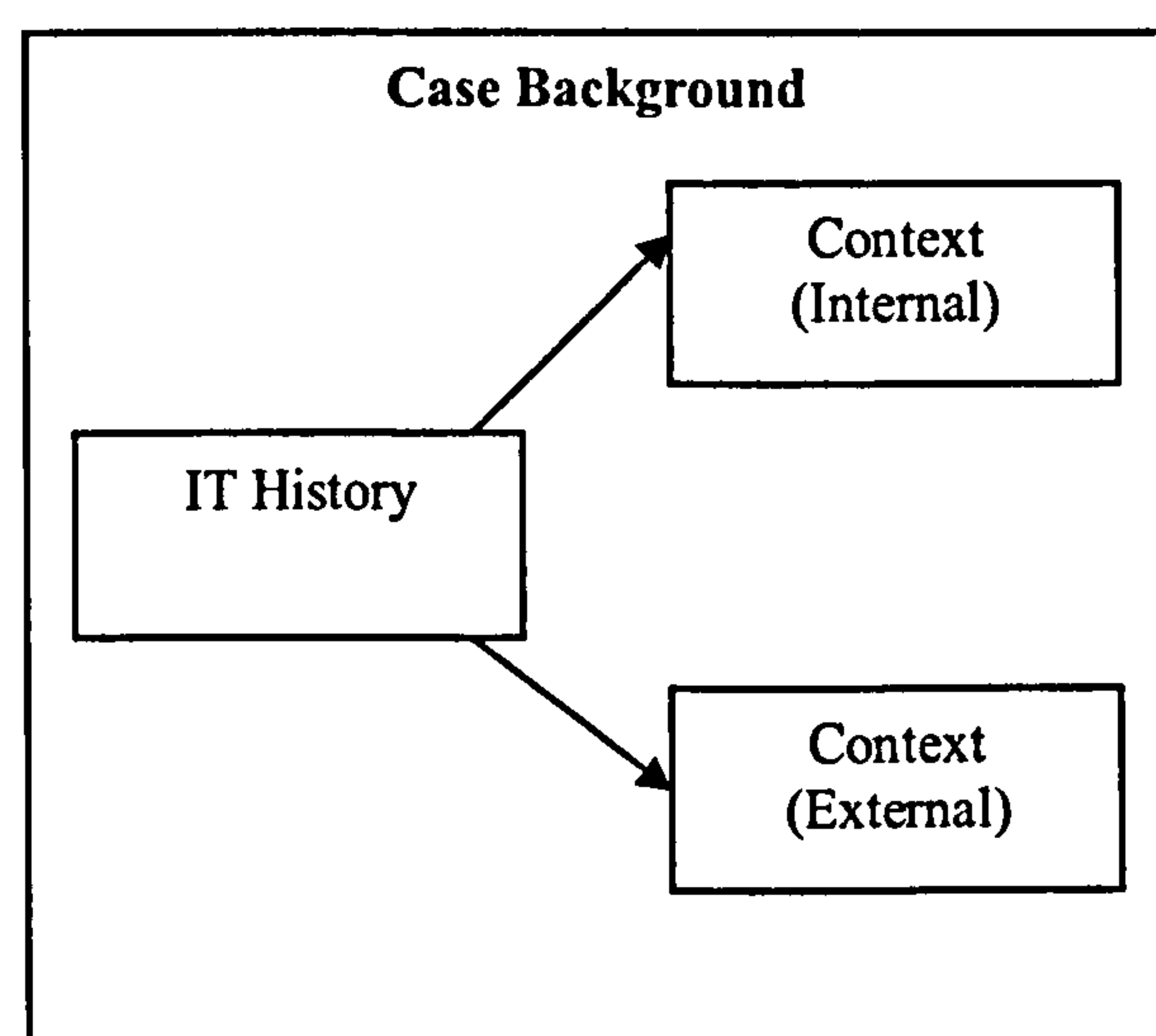


Figure 6. 2 IT Background at IBM, including internal and external context

6.2.1.1 Case Background

6.2.1.1.1 History and internal context

IBM makes a broad range of computers, including PCs, notebooks, mainframes and network servers. It also develops software and peripherals. According to the reports stated in IBM archives, during the 1980s and early 1990s, IBM was thrown into turmoil by back-to-back revolutions. The PC revolution placed computers directly in the hands of millions of people. And then, the client/server revolution sought to link all of those PCs (the 'clients') with larger computers that laboured in the background (the 'servers' that served data and applications to client machines).

Both revolutions transformed the way customers viewed, used and bought technology. And both fundamentally rocked IBM. Businesses' purchasing decisions were put in the hands of individuals and departments and not the places where IBM had long-standing customer relationships. Piece-part technologies took precedence over integrated solutions. The focus was on the desktop and personal productivity, not on business applications across the enterprise and system integration. By 1993, the company's annual net losses reached a record \$8 billion. Cost management and streamlining became a chief concern. It was then that IBM considered splitting its divisions into separate independent businesses. However, this was done without giving any consideration to overall system integration in mind.

According to Mike Cope, Call Centre Manager at IBM.COM, IBM splits into three 'geographies' namely: EMEA, Asia Pacific and the Americas. Furthermore, each 'geography' is subdivided into regions. Our research focuses mainly on the North region. The North Region entails UK, Ireland, Netherlands and South Africa.

Louis V. Gerstner arrived as IBM's chairman and CEO on April 1, 1993. Gerstner had been chairman and CEO of RJR Nabisco for four years, and had previously spent 11 years as a top executive at American Express. Gerstner brought with him a customer-oriented sensibility and the strategic-thinking expertise that he had honed through years as a management consultant at McKinsey & Co. Soon after he arrived, he had to take dramatic action to stabilize the company. These steps included rebuilding IBM's product line, continuing to shrink the workforce and making cost reductions. Despite mounting pressure to split IBM into separate, independent businesses, Gerstner tried to keep the company together.

In May 1997, IBM dramatically demonstrated computing's potential with 'Deep Blue', a 32-node IBM RS/6000 SP computer programmed to play chess on a world class level. In a six-game match in New York, Deep Blue defeated World Chess Champion Garry Kasparov. It was the first time a computer had beaten a top-ranked chess player in tournament play, and it ignited a public debate on

how close computers could come to approximating human intelligence. The scientists behind Deep Blue, however, preferred to stress more practical concerns. Deep Blue's calculating power - it could assess 200 million chess moves per second - had a wide range of applications in fields calling for the systematic exploration of a vast number of variables, among them forecasting weather, modelling financial data and developing new drug therapies.

IBM finished 2002 with revenues of US\$81 billion. IBM ranked number one on Fortune magazine's 2002 "Ten Most Admired Companies" list (IT category). IBM also received the most U.S. patents—a record 22,257 in 2002—for the tenth consecutive year. There was a change of chief executive officer with Samuel J. Palmisano replacing Lou Gerstner in 2001. More recently, towards the end of 2004, IBM sold its PC business to a Chinese company namely Lenovo. As part of the transaction, Lenovo and IBM will enter a broad-based, strategic alliance in which IBM will be the preferred services and customer financing provider to Lenovo. Lenovo will be the preferred supplier of PCs to IBM, enabling IBM to offer a full range of personal computing solutions to its enterprise and small and medium business clients. (Source: IBM Archives)

6.2.1.1.1 Sub-cultures discovered through our pilot in the internal context

Throughout 2001-2004 sub-cultures were observed at three levels: Senior Management level, Middle Management/Pre-Deployment Team (PDT) level and within the PDTs at end-user level (within IBM.COM in our case):

1. Sub-cultures at senior management level
2. Sub-cultures at Middle management/PDT Level
3. Sub-cultures within the PDT1 (IBM.COM) that are end-users

There were also team hierarchies at different levels:

“There was one team but it had lots of different dimensions, so we had one team at the world wide level and then we had three individual geography based teams, one for the Americas, one for Europe and one for Asia Pacific.” (Peter Cross, CRM Operations Manager)

The above sub-cultures are discussed in detail at a later stage in the ‘Process’ – part 2 of our analytic framework in this chapter.

6.2.1.1.2 External context

Even though IBM ranked number one on Fortune magazine’s 2002 “Ten Most Admired Companies” list (IT category), the market was getting more competitive and turbulent. CRM technologies like People Soft, FrontLine and Siebel eBusiness Applications had just arrived on the market. These packaged offerings or promises, were supposedly geared to help companies like IBM achieve a higher level of consistency and responsiveness. Furthermore, they claimed to eliminate the need to build CRM functionality internally from scratch – enabling rapid execution. They also claimed to eliminate the headaches of inconsistency across multiple divisions or business units. IBM like other major companies wanted to exploit the new technology and jumped on the band wagon. Microsoft as one of the main competitors launched ‘Windows 2000’. Starting a working relationship with Siebel (manufacturer of CRM Siebel) could have been considered as a good strategic move.

6.2.1.1.2.1 Network computing and system integration era

With the rise of the Internet and network computing IBM experienced another dramatic shift in the industry. Customers were getting more focussed towards integrated services. Everyone in the market was trying desperately to achieve so called ‘one-stop-service’ - targeting integrated solutions, services, products and technologies. IBM may have been better prepared with all the hard work it had done to catch up in the client/server field. In the autumn of 1995, delivering the keynote address at the ‘COMDEX’ computer industry trade show in Las Vegas, Gerstner articulated IBM's new vision - that

network computing would drive the next phase of industry growth and would be the company's overarching strategy. That year, IBM acquired Lotus Development Corp., and the next year acquired Tivoli Systems Inc. Services became the fastest growing segment of the company, with growth at more than 20 percent per year. The CRM era had started.

6.2.1.2 Content

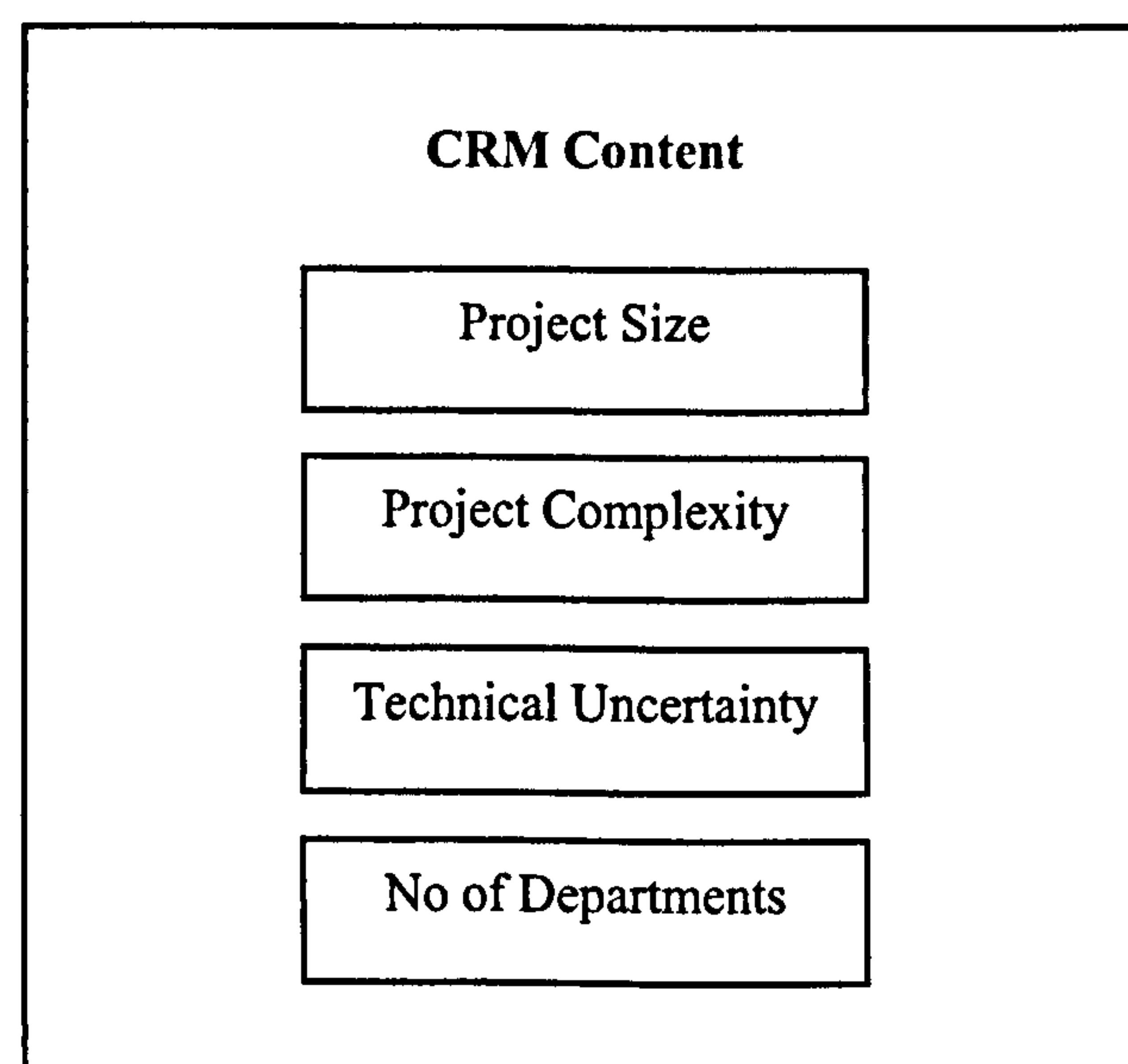


Figure 6.3 Content of the CRM Project at IBM.COM

The section covers proposed changes, including their substance, and how things were done and issues perceived (Pettigrew, 1985, 1990). This is discussed in terms of the rationale for CRM, the type of approach employed to implement the CRM (big bang or phased). Moreover, it will also discuss the project complexity, technical uncertainty and the number of departments which came onboard initially.

6.2.1.2.1 The rationale for CRM

As mentioned previously IBM is divided into 'geographies', regions and business units. The organisation is so vast that each 'geography', region and business unit operates like a stand alone business at times. IBM had already implemented over 100 customer-focused applications internally. However, each was dedicated to a separate business division.

"Hundreds of tools that were independently created with different data sets, different management systems, different support staff and different operational environments." (Steve Wright, Vice Chairman, CRM World Deployment)

Alison Hogg confirms:

"We had a lot of different systems talking and if, at a higher level, at a Senior Exec level, if they wanted an overall picture of what the business was doing then they had to go to multiple systems, is my understanding of how it worked in those days."

In Sarah Adams's opinion it was an attempt to standardise numerous data bases. She further adds:

"No I don't think so, but we had a number of different systems that we used for monitoring opportunities, sharing opportunities and for reporting, I think that was just not functional for a business to be able to show how they're doing and predict what they're doing if the actual systems are not integrating. So the vision, I would have said, would have been to have one single repository where the information can be pulled from and will be accurate for all the sales staff and their data, because we were duplicating information on."

Previous initiatives were unable to provide a global customer overview. According to Steve Wright, the need for an integrative approach was recognized and the company started to investigate different options available in the market for system integration. At the same time the market in general was

getting more competitive and turbulent. The decision to take on board CRM was made by three executives at the top level in December 1999.

The decision making process was limited to the senior management. According to Peter Cross:

“The decision was made in December 1999 and is was basically made by three executives, our CRM Executive, at the time, whose name was Lloyd Hunt, and there were other executives involved, one was the CIO for the corporation, Steve Wall, the other one was our Sales and Distribution Executive, Phil Etherington.”

According to the above, the decision to take onboard CRM Siebel was an attempt to develop further the monitoring of customer interaction with IBM. The decision was made by senior management without any end-user or external customer involvement. The CRM Siebel project was geared up with a top down approach and strict dead lines to adhere to.

6.2.1.3 Project Size

According to Steve Wright, Vice Chairman, World CRM Deployment, a ‘broad but not deep approach’ was used to deploy CRM 2000. IBM initially focussed on bringing together five audiences of their businesses. CRM Siebel was an attempt to obtain system integration throughout these audiences. The five audiences were: call centres.com, field sales, face-to-face sales, marketing and business partners.

IBM rolled out new major updates (releases) approximately twice a year. With each release, a new user community is brought on board. Smaller “dot” releases are introduced to the user population as needed. To accelerate further the deployment cycle, IBM avoided developing prototypes before each release. Instead, the company followed a rigorous methodology that enabled developers to configure a release without prototyping and then deploying the new function to end users. This approach

potentially allowed the project team to build on the lessons learned in earlier phases to improve the quality and time to market of subsequent phases of the implementation.

IBM tried to develop a robust architecture optimised for Siebel eBusiness Applications and combined with an underlying technology infrastructure consisting of various IBM server platforms and middleware. The first step was to assemble the project team that would create the underlying business and technology infrastructure and implement the software applications: Along with considerable assistance from Siebel Systems, IBM built a 200-plus strong, world-class team. And in the process, several hundred people at IBM have become Siebel-certified architects and configuration experts.

6.2.1.3.1 Structure for CRM Siebel deployment

According to Peter Cross, CRM Project Manager, CRM implementation had a broad team structure.

“There was one team but it had lots of different dimensions, so we had one team at the world wide level and then we had three individual geography based teams, one for the Americas, one for Europe and one for Asia Pacific.”

Peter Cross further states:

“There was a single world wide CRM Executive to whom the world wide team reported. Each one of the geography teams reported to a (in principle) Business Transformation Executive at the geography level but those geography teams took direction from the world wide CRM Exec.” Peter Cross

According to Peter Cross, IBM for the last four years had three legs to it. They had a set of project leaders who were largely organised by client audience. They had one group that was focussed on the call centres .com; the second group focussed on field sales (face-to-face sales people); the third group provided service and support.

To manage its Siebel deployment, IBM used a three-tier governance structure. It consisted of:

1. *An executive investment review board* – The board defined strategic direction and managed portfolio spending.
2. *A management team of business leaders and IT leaders* – This team ensured that the project stayed focused on meeting each functional group's specific needs.
3. *The CRM project team* – This team was accountable for the day-to-day execution of the project plan, including mapping business processes, planning organizational change activities, defining system requirements and allocating resources. Also within this layer is a centralized architecture team responsible for data modelling and building interfaces with legacy systems.

6.2.1.4 Complexity

According to Vince Ostrosky, Vice President, Customer Relationship Management (CRM) at IBM, IBM's internal implementation of eBusiness Applications is a story about change on the smallest, most personal scale. It is about changing the way IBM serves its customers, one by one. It is also about changing the way IBM employees access timely customer information, individual by individual. Looked at from another angle, however, it concerns IBM employees and Business Partners around the world moving to a single view of the customer and accessing that customer information anywhere, in real-time. It is about IBM's determination to become a more globally integrated, customer-focused company, with unprecedented speed and scale, responding to whatever means the customer chooses to do business with IBM:

"Our goal is to be viewed as one IBM by our customers and to work as one IBM internally. We're aiming to make IBM best of class in its industry for sales, marketing and customer service excellence. We believe we can achieve this goal by using applications to leverage our existing strengths as a market-intelligent enterprise." Vince Ostrosky, Vice President, Customer Relationship Management

According to Steve Wright the CRM strategy was in line with the IBM's business strategy to provide a 'one-stop-service' to the customers. According to Peter Cross it was an effort to transform a segregated IBM towards a more unified and integrated company:

"It basically started in 1994 when our then CEO, Lou Gerstner launched, it was about 11 re-engineering projects of which CRM was one. I remember in 1992 we had gone through probably the worst experience that the company had endured when we'd basically shed one third of IBM and the launch of these re-engineering initiatives was to address the fact that we'd lost one third of our employee base but we hadn't lost one third of the work. So he set about trying to transform IBM in all areas and so CRM was one of the 11 re-engineering initiatives that were launched at the time." Peter Cross

6.2.1.5 No of departments:

At the starting point in 1999, IBM set out to realize a new vision of CRM. The company wanted to link already established common worldwide business processes with a common system. The idea was to use technology to automate common business activities and to enable access to consistent, timely information worldwide – regardless of whether end-users are internal IBM salespeople, marketing, technical service and support professionals or IBM Business Partners. This was an effort to integrate the segregated parts of IBM. By using Siebel eBusiness Applications to integrate all the parts of its business that touch the customer, IBM expected to bring one of the world's largest corporations closer to its customers, one by one. The front-office elements of the solution included:

- IBM.COM Contact Centres (also known as PDT1)
- Technical Service and Support
- Business Partners
- Field Sales (all IBM brands)
- Professional Services (IBM Business Consulting Services)
- Marketing

6.2.1.5.1 IBM.COM were first to come onboard

The initial rollout was to 26 IBM.COM call centres. The CRM-driven change included everything from acclimatizing call centre agents to a new user interface, to shifting voluminous, disparate customer data onto a common database, re-engineering sales processes and, eventually, creating a global helpdesk:

“This deployment demonstrates again that we can do it all from design, implementation and processes to hardware, software and middleware. The only other way to accomplish this would be to form partnerships, but that would require integration since components would be less likely to work together.” (Cher de Rossiter, IBM CRM Project Executive)

The contract with ‘Siebel’ was signed in January 2000 and negotiated during that period. According to Steve Wright, IBM had agreed to a plan of phased deployment both geographic and potentially be functional in its design in the second quarter of year 2000. Implementation started with additional functionality to the IBM.COM call centre community in North America, firstly in Smyrna Georgia. Then it expanded horizontally, i.e. into other call centre organizations in North America and then into EMEA (Europe, Middle East and Africa) and to Asia Pacific through 2001.

6.2.1.5.2 Management support structure for the implementation of CRM Siebel for IBM.COM

Support groups, development groups and deployment groups were formed to facilitate the smooth run of the operation. Below, we go in detail in each one of them.

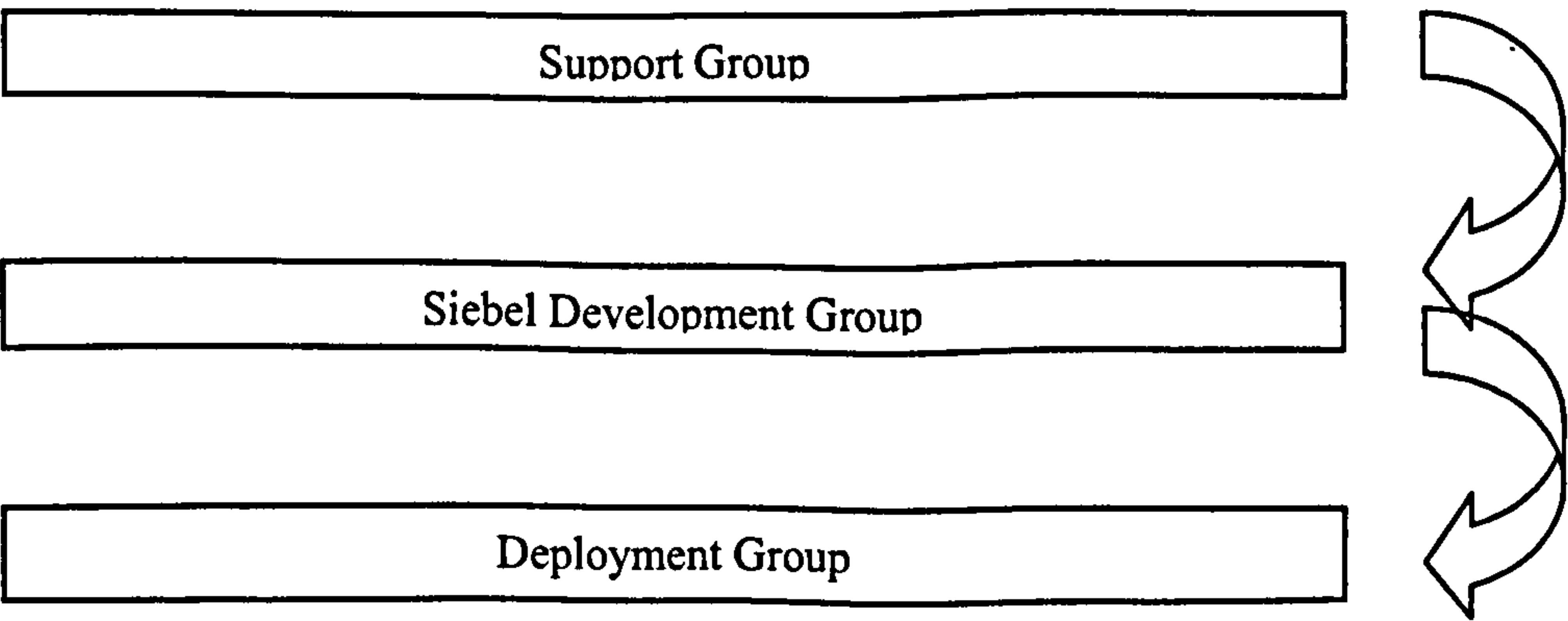


Figure 6. 4 Management support structure for the deployment of CRM Siebel at IBM.COM

6.2.1.5.2.1 Support Group

According to Peter Cross (IBM CRM Operations Manager):

“IBM had one group that was focussed on the call centres.com; we had one group that was focussed on field sales, our face to face sales people; and our people in the call centres that provided service and support; we had one group that was focussed on marketing and we had one group that was focussed on our business partners. So those are five sub-groups that were really our audience leads - their task was to understand the job that each one of those audience groups did, how it was evolving and how Siebel would be deployed to them and in effect they were the source of the guidance on how we would configure Siebel to meet the needs of those users.” Peter Cross

According to Steve Wright, IBM underestimated the quality and the state of the legacy data.

“This complicated the data migration.” Steve Wright

6.2.1.5.2.2 Siebel Development Group

Peter Cross further adds that group number two was Siebel development group. These were the people who actually knew the Siebel product inside out and they took the input from the audience leads and translated that into specific configuration of Siebel to respond to the needs of those individual users (Peter Cross). However, according to Jane Walsh a pilot user/end-user at IBM.COM, she would have liked to see more end-user involvement.

6.2.1.5.2.3 Deployment Group

The third group according to Peter Cross was the deployment group and this was the team whose mission was to take the output from the Development Group and to plan and execute the deployment of Siebel releases/upgrades to their end users. Peter Cross adds that, they had the technical preparation, they had the end-user communication and education and they had the actual physical cut-over management. That group really had two major sub-groups to it, one of which was the deployment planners and leaders, and these were the people that really focussed on the planning, the development

of the education, and development of communication. This was the stage according to Andrew Nunes and Jane Walsh (end-users), where end-users got involved in the implementation process in terms of getting a two and half day training (Donna McGeady, Deployment Leader).

CRM Executive reported to a group called Investment Review Board:

"It evolved in its formality over the four years but basically it had two key players and then there were others that moved in and out over time, but the two key players who remained constant throughout the life of the project was the Senior Executive responsible for sales and distribution in IBM, and [the second] the Corporation CIO." Peter Cross

Over the three geographies IBM tried to replicate the above. At the geography level, in each one of the three IBM geographies, the America's, Europe and Asia Pacific, there was a mirror image of two of the three legs. They tried to replicate the audience focus and the deployment focus at the geography level. However, they didn't duplicate the Development Group. The development was done once at a world wide level and the release/upgrade was then implemented commonly to all three geographies.

Peter Cross states that:

"CRM Executive, through the third leg of his stool, if you think about it he has an audience leg, he has a development leg, he has a deployment leg, that deployment leg splits out into having teams in each one of the three geographies and they take direction, really, from two people, they take direction from the world wide CRM Executive and they also take direction, from a line management standpoint, from their own Geography Executive, but that Geography Executive has a voice, if you will, through our Investment Review Board (IRB), through his or her boss, which is the World Wide Sales Executive."

To summarise the above again, IBM had a single executive decision making body called an IRB, they had a single world wide CRM Executive, Vince Ostrowskie who had two key executives reporting to

him. According to Peter Cross, at present the Sales Executive is Mike Lawrie and the CRM Executive is Vince Ostrowskie. *"These were the two Key Executives."* Peter Cross.

Project teams were formed to support a smooth implementation of CRM Siebel at IBM. The project team's goal was to enable business change for as many users as possible. Supporting Tele-web capabilities was the number-one priority for the initial release in 2000. By year-end 2001, the project team had deployed Siebel eBusiness Applications to more than 6,800 users in 30 countries, primarily in two business areas (IBM.COM and technical service and support). By 2003 'Business partners' came on board. This research focuses on the implementation at IBM.COM North Harbour, Portsmouth.

Prior to making the decision to acquire the system, IBM invested in excess of three years in coming to a common set of well defined processes. These processes comprise the inputs, the outputs and the workflows of all of their key sales and support activities. They also include opportunity management, customer satisfaction, relationship management, and offering information.

According to Peter Cross, during 1997, a support group had been developed to focus on five audiences: call centres.com; field sales, face-to-face sales, marketing and business partners:

"Their task was to understand the job that each one of those audience groups did, how it was evolving and how would be deployed to them and in effect they were the source of the guidance on how we would configure to meet the needs of those users." (Peter Cross, CRM Operations Manager)

As per 2004, IBM was running four identical CRM Siebel installations: one for North America; one for Europe, the Middle East and Africa; one for the Asia-Pacific region; and one for Japan. Potentially in the future, these four separate entities may share data and transactions and operate as a single, logical system worldwide. However that was not the case during the period of this research: *"Right now the four separate entities are islands,"* explains Gary Burnette, Director, Architecture and Siebel Implementation. *"They don't talk to each other operationally. The data from them is collated in*

a data warehouse for reporting purposes, but there's no real-time communication. We're working with Siebel Systems and other large Siebel customers to develop Universal Application Network technology as a way to improve our ability to communicate between our systems."

This research takes a special interest in CRM Siebel implementation in United Kingdom (UK) at IBM.COM located in Portsmouth, North Harbour.

The IBM project team deployed three CRM modules namely, Siebel Sales, Siebel Call Centre and Siebel Service to roughly 4,800 employees in IBM.COM sales and service contact centres worldwide. These centres support inbound and outbound Tele-service, Tele-sales and Tele-coverage activities. They often provide the first customer touch-point for gathering, qualifying and distributing customer information. The Siebel E-Business Applications give IBM.COM users a common platform for managing their accounts, contacts, opportunities and activities. The solution also provides advanced automated workflow capabilities and supports data queries. In addition, IBM.COM users are using advanced computer telephony integration (CTI) through the integration of Siebel eBusiness Applications with 'CTI' software, which automatically searches the database for the caller's number and promptly displays the customer record onscreen when it finds a match. Below, we discuss the above installation at North region Portsmouth in detail.

6.2.1.5.3 CRM Siebel implementation at the North Harbour location in Portsmouth

IBM.COM is an integrated Tele-web channel that includes Web sites and contact centres. The contact centres support inbound and outbound Tele-service, Tele-sales and Tele-coverage activities. Furthermore, they provide the first customer touch-point for gathering, qualifying and distributing customer information. IBM.COM, also known as PDT1, has a further six subsections which went live simultaneously. They are:

1. GSMB (Global Small and Medium Businesses)
2. Sectors
3. Software specialist

4. Business Partners
5. Tele-sales (based in Dublin)
6. Web team

According to Donna McGeady, CRM Deployment Leader, UK is a part of EMEA, which includes Europe, the Middle East and Africa. At IBM.COM five business units went on board simultaneously. Teams to action the implementation process and to train the users were formed to facilitate the implementation of CRM Siebel in UK. The first to come on board were IBM.COM, also called the PDT1 (Donna McGeady, CRM Deployment leader IBM.COM).

According to Mike Cope, Call Centre Manager, IBM.COM is effectively an organisation which provides service to the other parts of IBM. It also gets paid by these other parts of IBM. The end-users of the CRM Siebel at IBM.COM are also known as Inside Territory Sales Reps (ITSR). They work in teams and are managed by their respective team leaders.

Mike further illustrates:

"So these all work in .com and they work in the territories and areas covered by those business units."

According to Donna McGeady in the UK, IBM worked to a date of Jan 29th 2001 to go live with CRM Siebel, *"This was a strict deadline to adhere to."*

The same methodology 'broad but not deep' was used here as well. The next country to come on board was linked via parallel meetings. Process definition, mapping and transition across all processes was carried out. Appropriate team function workshops and documents to be actioned were created. All the above had a dead line of 21 November. According to Donna McGeady, data migration work was a critical success factor to meet the project deadline. Data migration was important as the data needed to

be moved from the existing legacy systems over to the new system. A shadow database was created to map the data from the legacy systems before putting it on the new system.

December 2000, territory assignment activities commenced to ensure that on migration all Tele-coverage agents had the correct 'accounts' and the 'opportunities' they were working on. Helpdesk training was set up, in-house experienced agents utilised and live helpdesk function set up to go live on cutover date.

Donna McGeady further adds that during December – January 2000/2001, data testing activities across the transfer from the old to the new system were carried out. The data stored in the shadow data base was tested prior to moving it to the new system. IBM.COM/PDT1 (Pre Deployment Team 1) went live on 29th of January (Donna McGeady, CRM Deployment leader IBM.COM). The data to be transferred was in a very poor state which was not discovered until late. The business process re-engineering team did not forecast the condition of the legacy data.

Peter Cross states:

“What have we learnt? The business process re-engineering is much more significant than anybody gave credence at the time.”

6.2.1.5.3.1 Updates at IBM.COM Portsmouth-UK

According to Mike Cope the updates are done centrally in EMEA and worldwide. Moreover, the updates are communicated to Portsmouth by a notes format rather than an actual call or a full announcement.

Mike Cope further adds that, *“ There will only be a full announcement if its going to be a major change to the way that we work or what we're actually going to see on the screen, if it's a very minor*

one like the most recent ones where a lot of the changes are more of a background change to the system and the way its being used for reporting etc, there maybe a couple of minor tweaks to search and fields, then it would be a note that goes out or it would go through someone like Lisa Nichols who is our focal point for processes, in their weekly or monthly calls they would discuss such things.”

During February 2003 the system was upgraded to the version 7.05 and the Field Sales (a business unit also known as PDT4) came on board. According to Mike this was part of a long term strategy by bringing onboard businesses using updates.

“That was part of the long term strategy, the field came on onboard as PDT4, we are PDT1 as we were the first one, so it was all part of the long term strategy of, first of all dot com go onboard, then you have some of the more minor functions such as the Sales Productivity centres, Techline (PDT2) etc, less customer facing, smaller groups.” Mike Cope

The upgrade to 7.05 was noticeable as the system went from client based to web based. This according to Mike was preparatory to bringing onboard Field Representatives (Reps). The System now could be accessed by the Field Reps while they were out on the field with the customers. However, the speed of downloads was affected by this upgrade.

6.2.1.6 Technical uncertainty

6.2.1.6.1 Data Migration issues

According to Peter Cross, the data migration did not go as planned:

“Legacy data was examined on an ongoing basis, I think when we bought the Siebel suite of applications and we then launched into its deployment we found that what we thought we knew about our data, grossly underestimated the challenge that was ahead of us. We knew that data migration was going to be a significant issue as we deployed Siebel. Did we understand everything that we would encounter – no.” Peter Cross

CRM legacy data was in a poor state. However, this was not discovered until the data migration began. Hence stakeholders from the senior management had differing perceptions regarding the contemporary situations in the various business units. The differing perceptions of stakeholders were influenced by their different interests, expectations and power (Long and Fahey, 2000). Senior management underestimated the amount of post-implementation training needed for end-users. Consequently after the initial user experience, they had to set up workshops to assist with user queries regarding the new system. The learning-on-the-job method did not seem to work particularly well:

"We needed a better transition plan - 30 to 45 days out - as to 'what do I do now' as opposed to just assume that they would have everything - that they would learn 'kind of' on the job." (Steve Wright, Vice Chairman, World CRM Deployment)

Poor quality of data led to duplication issues. According to Paul Priddy an ITSR (end-user):

"But one of the major bug-bears that I had with the entire system was, they brought in a front-end application and they bolted the back-end onto it, but they didn't look at the customer data and clean it. So basically, and that has been inherent of one of the major problems with IBM, is customer lists and the checking. You have so many other Departments with - that are associated with - that list, in one shape, form or another, who have access to it, don't clean it, but they just add things to it. So at the end of the day you probably ended up with multiple companies, with the same site addresses, but different phone numbers - or multiple companies with similar addresses, so they might have had so and so house, no road number and then the street name, so that would be another entry. So at the end of the day when you're working with a large account and, this is my only experience of working with one major account, I think at one stage I had a total listing of 150 plus entries in the UK alone."

Another ITSR sees the issues related to the volume of the legacy data and number of double entries make the work laborious. Sarah Adams reports:

“Yes, to be able to search through all of them to find which one is the correct account, for example, is quite a laborious task, purely because of the volume rather than anything else, but we’re an international company, luckily I’ve only got about 50 UK, because I could imagine what it would be like if it was worldwide, or even EMEA-wide, because obviously our UK companies have offices elsewhere.” Sarah Adams

Sarah further adds:

“You will make yourself use the system because there are people out there, because it’s a web-enabled system. If you’re out on the road, you have to be able to log onto the web to be able to use it and, I think, that’s a restriction that other people perhaps have.”

Sarah finds it frustrating to find out whether she is speaking to the right people or not. She further states:

“But the thing is - no-one was there and the process to get things removed was impossible; the process to get things changed again was difficult and at the end of the day I spent most of my time trying to confirm whether I was speaking to the right person or whether I was even speaking to the right company. Because I still had companies that the company name was Lloyds but the address was City Bank, or another financial institution, who were expanding in the country and wanted to acquire another property and Lloyds just happened to want to get rid of one.”

When IBM.COM at Portsmouth moved to the 7.05 (an upgrade) a decision regarding ITSRs loading their leads themselves was made by the management.

According to Alison Hogg, *“We are the only region that did that in EMEA, I not sure about the geographies. So that was a big change for people, they were used to filling in a form and passing it on, which was obviously a lot quicker than going through the system themselves and doing it. So that was*

the only kick-back, I guess, from the actual employees (ITSRs) out on the floor, although some employees (ITSRs) preferred it and they said I'd rather just load my own opportunity because then I know that I'm doing it correctly, but in general that was the only kick-back, not on the actual system itself but just the new process that they have to learn to load opportunities and that was specific to UK actually, not even North Region, just to our country."

Alison Hogg further argues that if they had not changed the system and had just changed the process, they would have still got the same 'kick-back'. *"It was because at that point we'd made the decision to change, it wasn't completely system led. Was it really?"*

She admits that people are reluctant to any change:

"The biggest problem is people don't like change." Alison Hogg

According to Mike, the change was introduced to promote self administrative work. However this slowed down the ITSR who were not used to filling up the forms themselves. The fact that this change was introduced together with a new release made matters worse.

"So the main reluctance was, 'Now I've got to load my own opportunities that's going to take me longer to do etc, etc.', and it was unfortunate that, obviously we brought this in at the same time as a new release so obviously you have download time. So it's taken some reps 20 minutes, sometimes, to load an opportunity, when we were getting through the first teething problems of the system. So from going to filling in a form, and if there was a doubt on the old system, it was reasonably invisible to them because it would be the admin team that was loading the opportunity - suddenly it was in their face and they were sitting there waiting 20 minutes to load an opportunity. So it was more a 'time and sort' of work issue rather than actually anything to do with the system." Mike Cope

There are also issues regarding upgrade from being a client-based system to becoming web-based. It slowed down the system considerably, as other geographies went online together. According to Katherine Duffy, they are always in a rush, and if the system runs slow it can add to their frustrations. She illustrates this below:

"I think the main issue for the users, speaking from my own point of view, is where I was very used to another system there were changes - and I think at one point it went from, like, a database system to via the web system, and I think at that point it seemed to affect performance in a negative way at that point. I don't know, some people said "when the America's are on in the afternoon, that slows it down", but then other people said "well that shouldn't affect it" for whatever technical reason, all beyond my understanding really. I don't know, I'm not really technical enough to understand it. But I can remember that when it changed, I think it went to a web system, it seemed that it was a lot slower than previously and sometimes the system can be slower than others which can be frustrating. But then I guess we're always trying to be in a hurry, so anything will seem - a second's wait will just seem slow to us." Katherine Duffy

There were other issues related to change according to Katherine Duffy:

"I think that everyone was quite frustrated when we moved to Siebel because it wasn't the same as what we used to have. We'd have to use different commands. You have to literally save the data, or you might; you could retype in some notes and then save them; go back into them the next day and if you accidentally hit a key it would overwrite all your notes - just things like that - getting used to it. We use it so quickly. But I do remember quite widespread frustration because the system was out, say most probably half a day, which if you've planned your calls on a system and then you can't access those planned calls it quite frustrating. We'd back-up as best we could but it still meant that, for our audit purposes, we had to then go in and put the call notes back onto Siebel and load opportunities rather than doing it there and then."

The above statement shows how people felt that they were obliged to use the system rather than wanting to use it as an effective tool. Furthermore, Business and IT are not married properly according to the above.

6.2.1.6.2 Perceived benefits by the Senior Management

The Siebel eBusiness Applications could supposedly give IBM.COM users a common platform for managing their accounts, contacts, opportunities and activities. The solution could also provide automated workflow capabilities and support data queries. In addition, IBM.COM users could use computer telephony integration (CTI) through the integration of Siebel eBusiness Applications with 'CTI' software, which automatically searches the database for the caller's number and promptly displays the customer record onscreen when it finds a match.

To date, the implementation has focused on deploying lead and opportunity management functionality. Once signed onto the system, partners receive leads directly from IBM's contact centre. Leads can be assigned automatically, based on known business partner capabilities, helping to reduce the rejection rate of opportunities. Or, IBM can override this process to assign leads manually to a specific partner. Either way, an e-mail initiates a closed-loop process. Partners must accept or reject a lead within a certain time frame and then follow up within a specified number of hours or days. As per 2004, IBM was running not one but four identical Siebel installations: one for North America; one for Europe, the Middle East and Africa; one for the Asia-Pacific region; and one for Japan. With time, these four separate entities would potentially share data and transactions and operate as a single, logical system worldwide. However, according to Gary Burnette that has not been the case:

"Right now the four separate entities are islands. They don't talk to each other operationally. The data from them is collated in a data warehouse for reporting purposes, but there's no real-time communication. We're working with Siebel Systems and other large Siebel customers to develop Universal Application Network technology as a way to improve our ability to communicate between our systems." Gary Burnette, Director, Architecture and Siebel Implementation

According to a case study report in IBM archives, CRM Siebel is delivering major business benefits. While IBM is only three years (2000 - 2003) into its global Siebel initiative, the benefits are already adding up. With more essential customer and product information right at their fingertips, contact centre agents are enjoying significant personal productivity gains. Reporting capabilities have improved. And, in many areas, duplication of effort is becoming a thing of the past, which will result in millions of dollars of cost savings annually. However according to our respondents duplication as per 2004 was still an ongoing problem. There are hopes for a better future according to the senior management and CRM Siebel will potentially play an important role in IBM's ongoing system integration efforts:

"Above all, the customer is clearly at the centre," adds Ostrosky. "We're committed to transforming IBM in a way that is meaningful to our customers. None of what we're doing matters if it doesn't convert to greater customer loyalty and increased revenue generation. Ultimately, IBM's implementation of Siebel eBusiness Applications will help make our customers want to do more business with IBM."

6.3 Part 2: Analyses of the 'Process' regarding CRM Siebel at IBM.COM – 2001-2004

The 'process' at IBM.COM was closely monitored through observations, interviews and attending several staff meetings during the period of January 2001 – Dec 2004. A participative research method has allowed a deeper insight into softer issues as they happen. In this section we analyse the process according to our framework in figure 6.5. We discuss the staff stability, user commitment, user training and management support. Finally we discuss the interdependencies between Psychological contracts, subculture interactions and knowledge sharing at IBM.COM in the light of our reviewed literature.

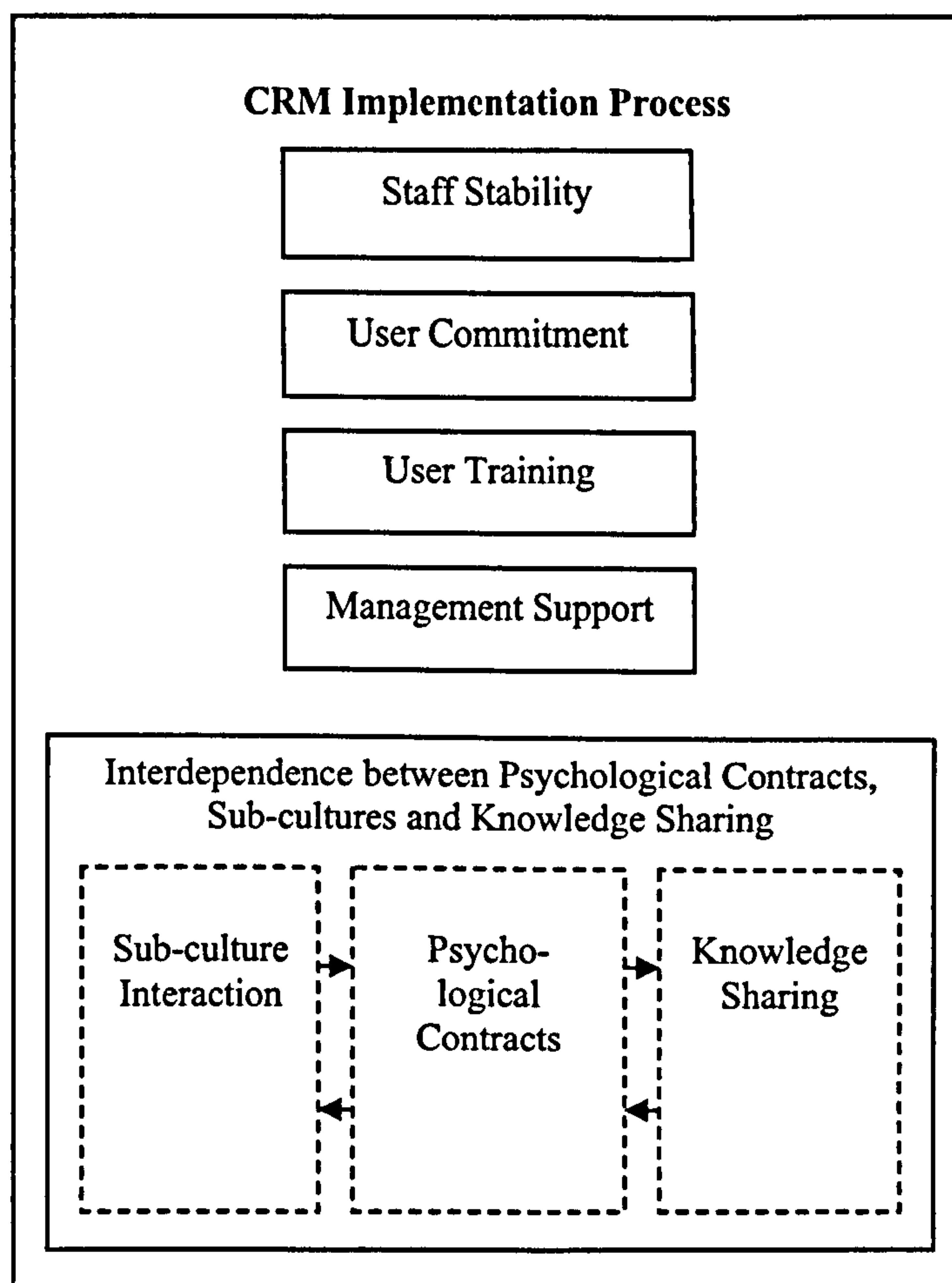


Figure 6.5 CRM Implementation Process including the salient elements derived from the literature review

6.3.1 Staff stability linked with user commitment:

We have linked staff stability with user commitment in this chapter. This is due to the fact that there were not many staff retention issues as such at IBM.COM. However, staff were stressed and felt pressured to use the system, which in turn potentially reduced their commitment and ownership. We discuss this using relevant literatures and reports from our respondents at the research site.

There was initial senior management support to spread an integrative culture through using CRM. Executive leadership was involved in this project full-time starting at a Vice Presidential level:

"This was a team charged with end-to-end responsibility... they were full time people with inclusion of all the geography teams and all the business units, dedicated full time for multi-year commitment to make this happen." (Steve Wright)

This showed commitment at senior level. However, implementation was done through a relatively imposed approach. According to several respondents, 'broad but not deep' did not penetrate enough to expose local discrepancies and issues. Implementation teams did gather information to benchmark good working practice at IBM. Local stakeholder perceptions at senior and middle management level were taken into consideration. However, according to staff at Portsmouth for example, stakeholder involvement at the ground level came at a later stage. Moreover no external customer involvement was considered at any stage, which challenges the 'broad but not deep' approach:

"We did not use customers for any validation or walk-throughs or anything like that." (Steve Wright)

Furthermore, the implementation was somewhat rushed. The issues with data migration were not taken into consideration:

"What we probably would have done in retrospect, if we were given a chance to re-do this, is extend our timetables a little bit. We had very aggressive plans." (Steve Wright)

Moreover, the quality of data was in a bad shape but this was not realized until the time of data migration. This data misfit created quality issues regarding the legacy data. Stakeholder involvement at the floor level came at a later stage according to Jane Walsh, a 'super-user'. Super users at IBM.COM at North Harbour UK were selected by IBM.COM managers when the trainer, Patrick Walsh from IBM USA, came down to facilitate the implementation six months after the signing of the contract:

"We went to the managers and said we want the people who you know are not afraid to target the system, people who would say why can't we do this, the people who question and people who will find things out about the system and share it with the rest of the community." (Donna McGeedy)

'Mutual perspective taking' across the business units at IBM.COM did not happen fully due to the competitive nature of jobs (Boland and Tenkasi, 1996). Furthermore, the real content of an apparently mutual perspective was not allowed to surface or be challenged. Thus interpretations which could shake the illusion of consensus between stakeholders were avoided (Gee, 1992). The achievement of a new definition of the situation in which all participants can share has still yet to take place at its full capacity (Habermas, 1979). Moreover, the updates were more like 'kick backs' (as expressed by our respondents) as the users were not even comfortable with the previous versions when the new releases arrived.

Mike Cope reports that there were some teething problems that the end-users had to cope with. He further illustrates:

"Yes when we moved to the 7.05 we made the decision that we were no longer going to have that and that the reps would load the leads themselves, and we're the only region that did that in EMEA - I not sure about the 'geographies'. So that was a big change for people; they were used to filling in a form and passing it on, which was obviously a lot quicker than going through the system themselves and doing it. So that was the only kick-back, I guess, from the actual employees out on the floor, although some employees preferred it and they said I'd rather just load my own opportunity because then I know that I'm doing it correctly, but in general that was the only kick-back, not on the actual system itself but just the new process that they have to learn to load opportunities and that was specific to UK actually, not even North Region, just to our country."

Management still seemed to have an opinion that the system is a step towards the future. Alison Hogg, the Operational Manager claims that the system is more than sufficient and the gradual introduction of new functionalities in the system is working.

"I think it's been directed to use in the right way, I think the education we received and the process guidelines, everything that we're getting down the line is clearly demonstrating how we should be using our system. I think there's a lot of the system that we don't use and I agree at the moment why we don't use it because it's just that the system has so much scope within it, if we were to be educated on every part of it at one time then we would just forget. I think what we're doing at the moment is gradually reintroducing little bits in and I think that's working. But I think it's, for some people it's too vast, there's too much to it and it isn't fully being utilised because it is just too vast and they don't capture everything that they could capture on it because of the way you have to go here, there and all round and they can see all different views."

Lisa Blake at Focal Point points out that it is a management driven change project and is not end-user driven. Annalise Marshall as a team leader however finds it difficult to promote this management driven change. She states:

"My frustration as a Team Leader, which I have, is to encourage the Team to use Siebel because there still is this mistrust. They're still dubious about how it fits in, I think."

Davis (1989) argues that perceived usefulness is a strong correlate of user acceptance. Our respondent is not sure about the usefulness of the system herself:

"I can't rely on it completely, I don't feel confident that all the data is correct in there and I don't feel confident, a 100% confident, about the reports that are pulled from Siebel" Annalise Marshall

She feels that the reports are misleading and give false reflections at times. However she is frustrated over the fact that they have to use the reports as there are not any other alternatives. She uses the system under obligation which cannot produce ownership and commitment. A shared mental space and mutual perspective are absent here. The obligation to use the system has resulted in 'employee under-obligation' types of psychological contracts (Shore and Barksdale, 1998; Newell et al., 2002;

Boland and Tenkasi, 1996). As a result of the above the commitment and staff stability has suffered. Shore and Barksdale (1998) argue that, because of low perceived employee obligations, this type of psychological contract secures poorer results for the organisation. This statement has been confirmed in the above situation at IBM.COM.

Our respondent, Annalise, still wants end-users to use the system, but for a different reason. She wants them to use it so she can gather evidence regarding the bugs in the system and make a case against it.

"Yes, I always say, 'No you still use it'. I know, I've had conversations with people only recently saying, 'Well why aren't you putting new comments on Siebel?' And you have to get them to buy into the benefits, and that is a fact. 'I will check it, and if there aren't any comments on there and there's an issue, how can I back you up and fight your corner?' As a tool it should be selling itself I think, but Team Leaders and Managers are having to do that."

6.3.1.1 End-user attempts to make changes are not being taken onboard

End-users have also tried to get their voices heard however without any results. This has decreased further their commitment to the system. Sara Adams, another ITSR reports her frustration:

"I just think it's more about people rather than the system itself. We cannot change the system and we know that. We've tried, we've said, "we want to change this," and we can't. We've always fed back, if there's anything that you've used and you don't like it - over the last three and a half years we've fed back on that. No it's been fed back up to EMEA and they feed it back worldwide but at the end of the day it's an off-the-shelf system so it's not so easy to change."

A shared ownership which could have resulted from end-user involvement and participation both in pre- and post-implementation phases has not been achieved. Our respondent further argues that people cannot be forced to use the system. She states:

"I don't think you ever can. At the end of the day people are people and you can't force someone, you can't put a gun to their head and say, 'You will use this system'."

There are also issues related to download time by the Field Sales people:

"We know that, and we're experienced users, it still takes seven to ten minutes to load a lead. And if you've got to load three that's half an hour out of your day, and that's quite a long time that you could be doing something else. And also it's an on-line application, if you're not in an area that you can be on-line. Some people who work from home don't have broadband. One of my Client Mangers lives in the middle of nowhere, and it takes him hours if he's at home because down his phone line to do it, it's just such a long time to replicate."

User commitment may also have been affected by the lack of involvement in the decision making process while buying the system. As stated previously in this chapter, the decision to buy CRM Siebel was made by the senior management at a top level. End-users were involved in the implementation process at a later stage. No external customer involvement was taken into consideration. As a result of a top-down approach and a lack of perceived usefulness people at the floor feel frustrated. An end-user expresses his frustration below:

"The idea of Siebel, the concept of Siebel as far as we were concerned was - if a customer calls you, with a few strokes of the keys, you'd bring his information up - if the customer information is crap or inaccurate you could be like, "Yes Bill could you just hang on a minute". What perception does that give the customer? Has IBM gone down - have they got the wrong details?" Paul Priddy

Siebel is not auditable. This means that even if people get monitored on Siebel their efforts cannot be rewarded with an extrinsic reward. Sarah Adam thinks that it is due to the inaccuracy of CRM Siebel. She expresses her lack of confidence in the system below:

“Siebel is not always accurate, for example, as we’ve already spoken, there could be duplicate opportunities and if yours is the one taken to loss, even though you believe that you’ve actually worked on it, if you were paid on Siebel and you’re not recognised on that opportunity because someone else’s is there, then that could be a problem.”

Sarah Adams states that not everybody uses the system:

“I think more people are using it, I think from the top down people are being told to use it. We’ve used it, for example, for opportunity identification, so we’d load an opportunity on to leads, we’d do that anyway with dot com because that’s our job. However the Field don’t necessarily.....they didn’t show that vision, if you like.....they weren’t concerned. It was just a system. They knew about opportunities. They knew they wouldn’t get paid. Why do they need to put it on the system?”

As the system is not auditable, there are groups such as Field Sales which do not feel obliged to use the CRM Siebel. The people who are using the system are the ones without an option. However, there are also some benefits associated with using the system, as stated by Katherine Duffy:

“There is benefit that we - there are things that we can do now that perhaps we couldn’t. For example, when we had the old system I used to write in the back of my book every opportunity I loaded, but when Siebel came in, because you could click on a button and see all your opportunities there was no need for me to make that paper based record.”

There were also several technical difficulties as reported by our respondents which did not help the matters by causing delays:

“I didn’t get on to it for three months, I remember now. But that was purely for log on reasons - ID’s. There was just too many people that were trying to implement it.” Sarah Adams

Sarah Adams continues to elaborate on the lack of user friendliness:

"I think it's a very good tool. However we perhaps could have used it a little bit better. We didn't bespoke it - it was off-the-shelf. But that's only from my previous experience in other companies of CRM - how to build packages if you like - just some of the usability, I had preferences that other people don't and I think that was more to do with it being an off-the-shelf application. The idea is brilliant but the amount of data that IBM have within the system - it's very hard to change that data, so it's not necessarily accurate because it's just imported in."

The process of governance of the tool does not give users much flexibility which has caused some frustration and may also be acting as an inhibitor to the user commitment.

According to Katherine Duffy:

"I don't think it really affects our productivity but people work in different ways and if it's not how they would choose to work it could be frustrating."

To summarise the above, people at the floor level feel that they have been pushed towards the system without feeling a shared ownership. The shared ownership and perceived usefulness could have been achieved through end-user participation in the CRM Siebel project right from the stage when the idea to CRM was born. The idea to take onboard CRM Siebel should have been end-user and not management driven. This could have resulted in 'mutual perspective taking' and a 'shared context for knowing' between all the stakeholders of the system. As a result a 'mutual high-obligations' type of psychological contract could have been established (between the management and the end-users) leading to better staff stability and end-user commitment.

6.3.2 User Training

Under this heading we discuss the user training and how it was perceived by the end-users. We discuss the duration and training structure in light of user participation and learning experience.

IBM decided to train so called 'super-users' initially. The idea was to use these 'super-users' to train the rest of the end-users of the system.

"Lisa Blake trained a few of us for two and a half days and then we in turn trained the staff here on the upgrades because it was slightly different, but they only needed half a day to a day to train on it because they were users already." Sarah Adams

Other issues relating to training of end-users arose:

"Learning by the PC wasn't good - because it doesn't really teach you much. That training was a certified course, and you had to finish it otherwise it would go up the line to management. That wasn't a good way of learning." Andrew Nunes, end-user IBM.COM

Jane Walsh, IBM.COM Sales Account Manager who was also a super-user, states:

"When super-users started they were shown the system, which was totally different from the system they knew. So they had to get their minds set round how people's attitudes would be toward the system."

Super-users got involved with the trainer Patrick Walsh from Atlanta, USA and piloted the system. The super-users were trained and then used to influence the attitudes and perceived usefulness of the end-users of the system (Davis, 1989). They were to convince people of the benefits of a completely new database and layout. This was a major change to IBM.COM because it changed the whole of their database. A lot of long-standing employees were in a mind-set resistant to change. According to Jane Walsh super-users needed first to understand the benefits of the system themselves to be able to convince others. They had to get their minds set around what the database could offer them.

Training was given by these super-users to the rest of the floor before the release date. The duration of the training program was three to four weeks, with two and a half days per user effectively. Training duration seems to have been rushed and once more the focus was on the ‘broad but not deep’ methodology. The short training duration led to an illusion of consensus between the parties (Gee, 1992). In our analysis, a false consensus existed between the trainers/super-users at IBM.COM, in which trainers assumed that end-users were more similar to themselves than actually was the case (Ross et al., 1977). A ‘shared context for knowing’ could not take place due to the lack of shared and ‘mutual high-obligations’ types of psychological contracts (Newell et al., 2002; Shore and Barksdale, 1998).

According to Peter Cross CRM Project Manager they tried to strike a balance between what was absolutely essential and what was affordable:

“Is there more that we could have done, if you had unlimited money, yes, but I think we did strike an appropriate balance between what was needed, what was practical and what was affordable.”

The involvement of the end-users was however completely ignored. Peter Cross seems to be satisfied with training provided for the end-users.

“Is it sufficient, I think it is. Could we have done more? Yes, when I think of education, though, in terms of what we did with Siebel the application.” Peter Cross

However, with hindsight he explains that they could have done more:

“Siebel is just an application. It’s intended to institutionalise how people do work. There’s a context though in which they do that work as sales people, and so I would like to have seen us better marry that education with communication, and education around why we were organising ourselves; resources around different customers types; how we were relating to those customer types; which

routes to market we were taking with those customers; how we expected the sales processes to execute; how we expected different sales positions to relate to one another. Armed with that context the adoption and use of Siebel would have been that much more comprehensive.” Peter Cross

End-users did not see training as a complete involvement in the implementation process. For them it was something imposed rather than end-user driven.

“The initial implementation I wasn’t really involved with, apart from having the training on.” Sarah Adams

Managers were given a different type of training according to Katherine Duffy:

“Yes, everyone had training, the Managers, I think, had slightly different training, I think they had their own session because they would pull reports from the whole team, so what they need would be slightly different to the reps.”

Katherine Duffy expresses her feelings over the duration of training and the learning experience:

“I guess the one thing I would say - it would have been better if we could have played around more with the system. Because the transition was between December to January, the days between Christmas and New Year are fairly quiet, and with a skeleton staff on it would have been great to have had a system where we could have just played around, pretended to enter some activities and opportunities, just played around with it where it wasn’t going to affect our productivity like it would in January when we were trying to get a fast start to start the year. I guess that would have been helpful as a training exercise.”

To analyse the above:

Training duration was very short and did not give enough time for users to understand and feel comfortable with the system (Bingi and Sharma, 1999). Patrick Walsh from Atlanta spent too short a time at IBM.COM. Time constraints prevented full transfer of perceived benefits of the system from Patrick Walsh to super-users and from these to end-users (Pliskin et al., 1993). End-users were put on a two and a half day course prior to the system going live. Moreover they had to learn the system to be able to retain their job security (Davenport et al., 1998). The psychological contracts appear to have been imposed and of 'employee under-obligation' types rather than being of 'mutual high-obligations' types (Rousseau, 1995; Shore and Barksdale, 1998).

As a project folds out, not only does 'Process' in Pettigrew's (1985) five-fold framework become important, but so also does user training and experience (Willcocks and Margetts, 1994). In the research case user commitment was highly dependent on imposed rather than shared or 'mutual high-obligations' types of psychological contract (Shore and Barksdale, 1998). As a result tacit knowledge sharing was incomplete (Boland and Tenkasi, 1996). Power-based relationships as a result of imposed psychological contracts led to lack of reciprocity and lack of trust (Krogh et al., 2000). Furthermore, end-user culture was not fully understood and taken into consideration due to the lack of time (Claver et al., 2001).

According to Pliskin et al. (1993) the same system may have different meanings for different people. Issues discussed above regarding data migration and training at IBM point to the same system having different meanings for different people. System analysts and users did not have the same points of view concerning the CRM system. Interaction between different levels of hierarchy could have helped to create a better understanding of the state of the legacy system and the training needs. Interaction did take place but only to a limited extent, due partly to the implementation process structure itself not allowing the creative abrasion to take place fully, thus impeding knowledge sharing (Leonard-Barton, 1995).

Full time workers were deployed in teams, to interact with different business units, to understand the business need and processes, according to Steve Wright. Some mutual understanding may have been present in the interactions. However, an implicit component of the psychological contract was absent, thus resulting in lack of clarity and illusion of consensus for both parties involved (Anderson and Schalk, 1998; Gee, 1993). This inhibited knowledge sharing regarding the state of the legacy data and resulted in data misfit. The explicit elements of the psychological contracts between the senior management and the end-users included a sense of obligation to work and job insecurity. These elements resulted in an ‘employee under-obligation’ type of psychological contract as the contract was more imposed in nature. Differing stakeholder motives also inhibited interactions in-depth (Thibaut and Kelly, 1959). The above resulted in insufficient information regarding both the data on the legacy systems and the training needs of the end-users.

6.3.3 Management Support

IBM formed a development group. These were the people who assumed they knew the product inside out, having taken some input from the audience leads, and translated that into specific configurations in response to their perceived individual user needs. However, according to Jane Walsh, a pilot user/end-user at IBM.COM, she would have liked to see more end-user involvement. Relatedly, for Steve Wright, IBM underestimated the quality and the state of the legacy data. This complicated the data migration. A deployment team was made responsible for taking output from the Development Group and planning and executing deployment of releases/upgrades to their end users:

“They had the technical preparation, they had the end user communication and education and they had the actual physical cut-over management. That group really had two major sub-groups to it, one was the deployment planners and leaders, and these were the people that really focused on the planning, the development of the education, and development of communication.” (Peter Cross)

This was the stage, according to Andrew Nunes and Jane Walsh (end-users), where end-users got involved in the implementation process in that they received two and a half days training.

CRM Executive reported to a group called Investment Review Board:

“The two key players who remained constant throughout the life of the project was the Senior Executive responsible for sales and distribution in IBM and the Corporation CIO.” (Peter Cross)

Over the three geographies IBM tried to replicate the above. At the geography level, in each one of the three IBM geographies, the America's, Europe and Asia Pacific, there was a mirror image of two of the three legs. They tried to replicate the audience focus and the deployment focus at the geography level. However, they did not duplicate the Development Group. The development was done once at a world wide level and the release/upgrade was then implemented commonly to all three geographies. The above method however did not work and IBM ended up creating islands of knowledge separated from one another.

To manage its Siebel deployment, IBM used a three-tier governance structure that completely misjudged the state the legacy data was in at the time of deployment. This resulted in data migration issues, double entries and duplications.

Sarah Adams confirms:

“Say look there's 150 accounts here we need it down to two, here are the main offices, can you put them on, and silly things like case sensitivity, it's frustrating, it is silly but it's one of those things, if you don't know, if you're covering for someone else and you need to search for one of their customers, that's just a silly quirk. Like you say, you learn and on your own accounts you know what it's got to be typed in as, but if you're doing someone else's information then it's quite, that kind of thing. I'd change the activity queue to only show certain activities and what you need to do, to make it more user-friendly than it currently is.”

End-user involvement was completely ignored in the early stages. It came later in the implementation process. Even then management feedback to end-user initiatives was minimal:

"It was something that I raised back in the early days when we had round-tables - we still have round-tables with some of the Senior Exec's within IBM.COM - and I was fortunate enough to be on a round-table in the early days. And it was discussed, 'If we spend a million pounds on cleaning customer data', it was an American who said, 'So how would that reflect in benefit in your productivity?' And I stuck my neck out and said, 'I believe it would increase productivity by 20%.' He said, 'OK then if we're pulling in X million pounds worth of revenue, or opportunities, which would be the greater, then we're making a saving here', and I said, 'Yes it's obvious.'" Paul Priddy

However in the above case according to Paul Priddy no action resulted. Moreover, management claim that data quality issues are related to end-user errors. Upon being asking regarding the data quality issues the Operational Manager Alison Hogg responded:

"We have hundreds, yes. Nearly all of them are user error." Alison Hogg

According to Katherine Duffy, a team leader, a system named BRIO is used to monitor the end-user progress. However there is no link between BRIO and Siebel at the moment and the two systems need to be loaded separately:

"Yes, we've used various systems over the years, since we've had Siebel. We currently use something like BRIO, which enables us to see all the Rep's opportunities - this quarter, next quarter- if they're won or if they're at the first stage of the sales cycle - how they're moving up within the quarter."
Katherine Duffy, team leader IBM.COM

Different business units at IBM.COM can access the CRM system. However, they cannot amend or add. Annalise Marshal another team leader states:

"We've got a name and a password but it's only a read only so you can't actually amend anything. So I can go in and have a look on an opportunity if there's a field missing which is causing problems, I can see that there's a field missing but I can't actually do anything about it."

Annalise Marshal further expresses her frustration over the fact that nothing is being done to change the situation. This is having a negative affect on user commitment. *"Well all the things I've told you everyone's fully aware of and I don't know why, we've raised it many times and it never seems to get fixed, so they are aware of the problem and I think most people here would agree with it."*

To analyse the above, CRM Siebel project made a good start with a sponsorship at senior management level (Goodhue et al. 2002). The Project had strong senior management support and different teams were developed to adapt a 'broad but not deep' approach. A 'top-down' structure was used to implement an organic themed system such as CRM to integrate the existing subunits. The goal was to give customers a view of one IBM as mentioned previously in this chapter. However the structure to implement CRM Siebel was predominantly mechanistic. Various teams were developed to support the smooth run of the project. However, the interaction between the teams was limited. The focus of the project has been largely towards customer contact processes without making corresponding changes in internal structures and systems (Digby, Reichheld, and Scheffer, 2002).

The mechanistic structure of the organisation did not enable flattening of the hierarchies. As a result the end-user involvement came at a later stage, when the decision to take on board CRM Siebel had already been made. As the role of management at IBM.COM developed it became in effect more of a controlling and monitoring one, whereas a facilitating role could have been more successful. IBM management had different frames (frames are cognitive structures or mental models that are held by individuals) regarding the project, which were not completely understood by the end-users, and hence the frames did not get shared (Davidson, 2002). As a result of the above people with differing perceptions saw and acted upon things differently. The data issues did not get properly addressed and the quality of data residing on the system continued to remain poor.

6.3.4 Interdependence between Psychological Contracts, Sub-cultures and Knowledge Sharing

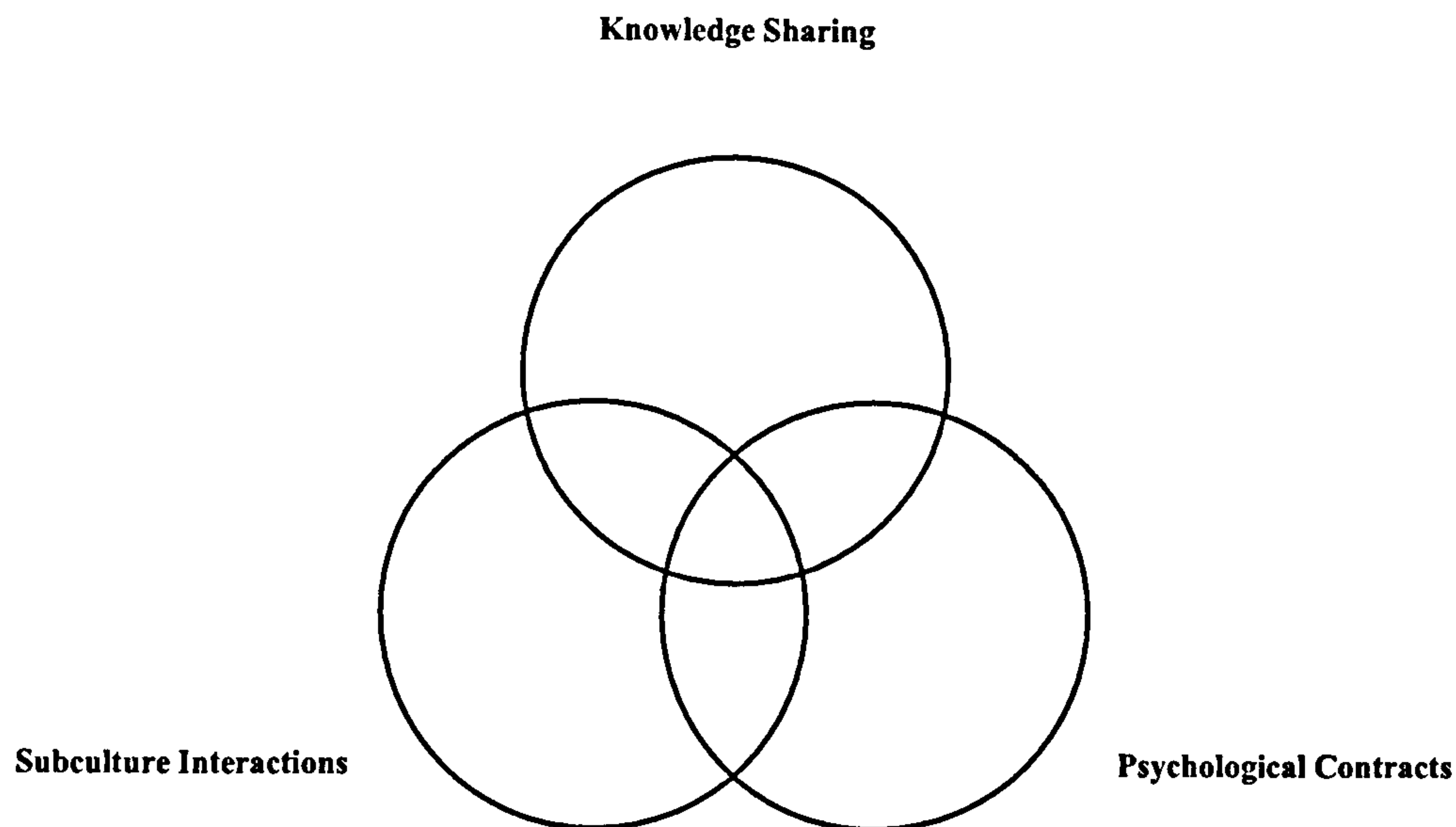


Figure 6. 6 Interdependence between Psychological Contracts, Sub-cultures and Knowledge Sharing

In this section we will discuss the interdependence between subculture interactions, knowledge sharing and psychological contracts at IBM. A special focus is given to the sharing of non-codified knowledge in form of the ‘tricks of the trade’ and how it gets shared across the sub-cultures.

6.3.4.1 Subculture Interaction and Psychological Contracts

The subculture interaction at the senior management level remained limited to some interactions between the middle and senior management. There was very limited interaction between the senior management and the end-users of the system. Decisions were made at the senior level without any representation from end-users of the system.

Subculture interaction was also limited between the middle management and end-users. The interaction was more formalised within a mechanistic framework. Krogh, G. et al. (2000) argue that an organisation must actively pursue the work context as a learning organisation where the individuals of

that organisation are attuned to learning new things. A learning organisation environment was absent at IBM.COM. Learning implies encountering and assimilating new facts. The end-users were not prepared to encounter CRM Siebel, and were getting stressed over the fact that data was in a poor state. Double entries to the systems were making matters worse. These double entries continued to occur at the end-user level as a result of inadequate subculture interaction. Below, Annalise Marshal, a Team Leader for the Internal Software Sales Rep Team in IBM.COM, expresses her mistrust in CRM Siebel and reports:

"I don't think there's a trust in Siebel. People use Siebel in different ways. There's the standard approach that everybody is asked to use it. So for opportunity loading, for example, there is a set way we need to load it so that the data flows between Siebel and ERW, which is the management matrix that we use, that's standard. In terms of searching for accounts and contacts, people use it for that because that's logging activities; activity queues, some people use it, some people don't. We do encourage people to use it from a DQ (Data Quality) point of view, then if you're checking your activity queues and you're using that in that way, then it will help you; but a lot of people still use their calendars or their diaries just because they find that Siebel can be a bit daunting and complex. They don't trust it still, they find it a slow tool and they don't trust it."

According to our respondent Annalise the data quality is not up to the mark. She further argues that there is not much of a problem with the system itself:

"I don't think it's distrusting the tool, I think the tool is good, I think the problem is that the data that's on the tool is not up-to-date and I don't think that's a Siebel problem necessarily, I think that's an IBM problem. But then therefore the perception is that it's Siebel."

IBM is using CRM Siebel as a forecasting tool:

"The other thing is that IBM are using Siebel as a forecasting tool, they're not using it as a CRM tool. It's not a customer relationship management because you can phone a customer and not be aware that somebody the day before in another part of IBM has called them. So the customer gets upset, they say 'Don't you use CRM?', and then we're talking to them and IBM are saying, 'Have you thought about your customer relationship management?' But we're not actually doing it ourselves effectively".

Annalise Marshal

According to the above CRM Siebel is being used to log new opportunities and the data then flows to management matrix and other forecasting and monitoring systems such as SCOTT (SCOTT is the software which IBM.COM management uses to check the opportunities logged on CRM Siebel.).

The above shows again how the role of managing in a mechanistically structured organisation leads more towards control and monitoring of the end-users hooked to the systems with their head sets. However, the end-users are also IBM.COM's internal customers. Their job satisfaction and how they relate to the management is of vital importance. The management perceives CRM Siebel to be a tool that facilitates their interactions with the customers and yet end-users see it as a 'forecasting tool' (Long and Fahey, 2000). Moreover the bad data on the system causes frustration resulting in poor customer service:

"It's not up-to-date, it's not updated. The process within IBM to change the data on Siebel is very long-winded, so people just don't have time to do it. So you've got to move on to the next call, you've got to close. Rightly or wrongly, it's not right, but people just leave it and that person's no longer there - so I'll put an activity in. I call this contact. He's no longer there! But they don't then do the stuff behind that to send off to the team that will update the record - so the data is not being updated as it should be. Contacts, you can phone in to customers and they haven't been there for two years. There's contacts that are missing on Siebel CRM - IBM know but they're not adding them on, so it's just not slick." Annalise Marshal

Not everyone at IBM.COM has access to the entire system. End-users individually log opportunities onto the system and are thereby creating frequent duplications that remain undetected:

“Not everyone has access, most of the field resource. I know that the Software Group have come onboard last years. I don’t know about Sectors. And the Brands now have access, but I know that the most of IBM doesn’t - so you’ve got that problem. Plus, of course, you’ve got the limited access on an opportunity; you can’t go into an opportunity unless you’re one of the sales teams, so that doesn’t help. Duplication, all the time, all the time, it’s very, very difficult.” Annalise Marshal

6.3.4.2 Duplication continues

Sarah Adams describes the duplication at IBM.COM:

“The functionality, for example, within. I have got ten accounts - however on Siebel .. four of those ten accounts - they have 283 entries. And as a new person to choose, which account do you choose? You’ve got to know which ones are offers. There are duplicate entries, there are duplicate contacts, there are duplicates there that you can’t just get rid of or sub-section it.”

There is also rivalry between the business units at IBM.COM:

“Well it’s mainly between SMB and Large Enterprise - there’s a rivalry between the two, and then within. I don’t’ know about SMB because I’m not exposed to that, but certainly within Large Enterprises there is also a bit of rivalry between the different units, Business Units.” Paul Priddy

The sub-sections do not have a strong communication between them. This is due to the competitive nature of their jobs. As a result end-users within and across subsections don’t share information regarding opportunities. Knowledge sharing, -implicit and explicit, codified and non-codified- as a result of the above suffers. Lack of interaction between the business units due to competition and confidentiality also results in double entries:

"Say for instance when we're logging our opportunity to someone within IBM, a Business Partner would not be able to see that opportunity because then, obviously, they could compete. So that's one reason I guess, but I've never seen the Business Partner system - but they can also input opportunities, as we can. So it sometimes can get to the point where the Business Partner enters an opportunity and so do we - and there's duplication on that. So I guess just managing the data and keeping it correct and not duplicating it is quite difficult now there are a lot of people on the system." Katherine Duffy, end-user

Alison Hogg confirms and states:

"So potentially you could be ringing the customer, inviting them to an event or asking them if they've seen the latest offerings, and they might already be aware of it and say, 'Well I spoke to someone yesterday about it', or, 'I've bought that'."

According to Peter Cross, not everyone uses the system, which does not help matters. Information regarding 'tricks of the trade' remains buried inside the departmental/business unit silos. Lisa Blake explains that there is no system available at the moment which could facilitate interaction between the PDTs and business units within dot com around CRM. However, she claims that interaction does take place at her level (subject matter expert, trainer level).

Alison Hogg claims that the double entries are captured by the reports that management pulls out while doing a compliance test. However as per 2004 no reports were pulled out directly from CRM Siebel. Alison claims that the CRM Siebel analytics will develop further towards the end of 2004 and make it easier. However CRM Siebel analytics has its limitations:

"The only downside of that is it's not historical. I need to be able to pull a report that says to me, 'OK this time last week how much was loaded,' because if I pull it with the Siebel analytics project that's coming, I can only see what's been loaded today. I don't want to know that. If I'm looking to see

who's created the most opportunities I need to look at it maybe from last week, the week before, not just this week. So I need the whole picture and historical data." Alison Hogg

Katherine Duffy continues to express her frustration over double entries:

"As sales people it's always, "Well you haven't done this on a lead." I think there are quite a lot of [duplications]. For instance - we log opportunities and we have to fill in what seems like the same information more than once."

She argues above that duplication of entries is also closely related to duplication of effort and the time spent to submit the information. User commitment is negatively effected by the stress caused by duplication and double entries. Management, however, considers double entries as errors made by the end-users. The psychological contracts between the IBM.COM management and the end-users appear to be of 'employee under-obligation' types. This is due to the fact that end-users see the system as a hurdle in that it slows down the process of customer service thereby decreasing its quality. Management on the other hand perceive CRM Siebel as a tool that facilitates interaction between the end-users and external customers.

The duplication of efforts at IBM.COM continues as Katherine Duffy states more on duplication:

"If you raise an opportunity, someone has called and raised an opportunity Business Partners, they won't be able to see that opportunity."

According to the above, if 'Business Partners' then call the same customer, they would end up asking the same sort of questions again. Thus, not only duplicating the effort but also potentially causing customer dissatisfaction.

According to Mike Cope information sharing across the sub-units is entirely dependent on access and control. This in turn prevents not only the sharing of 'tricks of the trade' but also sharing of descriptive and prescriptive types of knowledge. According to Pliskin et al. (1993) the same system may have different meanings for different people. Issues discussed above regarding data migration and training at IBM point to the same system having different meanings for different people. System analysts and users did not have the same points of view concerning the CRM system. Prolonged interaction between different levels of hierarchy could have helped to create a better understanding of the state of the legacy system and the training needs. Interaction did take place but only to a limited extent, due partly to the implementation process structure itself not allowing the creative abrasion to take place fully, thus impeding knowledge sharing (Leonard-Barton, 1995).

Davidson (2002) argues how frames and shifts in frame salience influence sense-making during requirement determination. This study helps to understand how interpretive power is exercised in an IS project. Moving on from frames to shared frames, Orlikowski and Gash (1994) show shared frames as closely related to the concept of sub-cultures. Individuals - drawing on their shared frames - engage in symbolic action and thereby construct a social reality that reflects their common assumptions, beliefs and understandings and that includes particular rules, rituals and customary practice. According to Geertz (1973) and Van Maanen and Barley (1985), sub-cultures rely heavily on cognitive elements such as common frames of reference. A sharing of frames did not take place across the hierarchies at IBM. This was more evident at the lower level of hierarchies at IBM.COM. Particularly as to how managers and end-users had differing perceptions regarding the usefulness of the system and data issues.

According to Steve Wright, full time workers were deployed in teams, to interact with different business units, to understand the business need and processes. Some mutual understanding may have been present in the interactions. However, an implicit component of the psychological contract was absent, thus resulting in lack of clarity and illusion of consensus for both parties involved (Anderson and Schalk, 1998; Gee, 1993). This inhibited knowledge sharing and resulted in data misfit. According

to Lawrence and Lorsch (1967) the particularities of the environment, task and technologies faced by an organisation's sub-cultures are associated with differences in cognitive and emotional orientations among individuals in these sub-cultures. There was a lack of the sharing of cognitive and emotional orientations regarding data issues at IBM.COM which widened the sub-cultural divide between the management and end-users. This resulted in 'employee under-obligation' types of psychological contracts between the end-users of the system and the management.

The explicit elements of the psychological contracts between the senior management and the end-users included a sense of obligation to work and job security. However, this resulted also in an 'employee under-obligation' type of psychological contract as the contract was more often of an imposed nature. Differing stakeholder motives also inhibited interactions in-depth (Thibaut and Kelly, 1959). These factors resulted in insufficient information with regard to both the data on the legacy systems and the training needs of the end-users. There may also have been a false impression regarding the state of data due to the lack of in-depth interaction between the partners. Different theories of meaning on the subject of data quality were not exposed. People from different backgrounds subject to normal discourse could have agreed unproblematically at the level of words while truly but erroneously believing that they were indicating the same referent domain of meaning, thus giving rise to an illusion of consensus regarding the state of legacy data (Gee, 1992).

Moreover according to Alison Hogg, whenever an upgrade arrives, people in different PDTs get separate training. She also admits that there is not much interaction between the PDTs themselves. However, there has been some interaction between the trainer Lisa Nichols at dot com and another business unit, namely Field Sales.

"Lisa actually worked with the PDT4 to say, 'Here's what we did, here's our experiences'. She sat in on a lot of the clinics and workshops to help and work with the other people. So there was a bit of cross working there, but it was more just a general sort of agreement between myself and the person running that rather than structured." Mike Cope

Evidently the higher one goes in the levels of hierarchy the freer the interaction between individuals and across departments:

"I think the interaction wouldn't be at our level. If there were interaction with say different sponsors, different areas, and the area in which Alex Parsons (one of the executives) works for instance, the interaction would be at a higher level. It wouldn't be at our level, if you see what I'm saying." Alison Hogg

Some interaction with mutual perspectives does take place at the senior management level. However, the environment at that level of hierarchy is less threatening and people have more mutual understanding and shared benefits resulting in 'mutual high-obligations' types of psychological contracts. The lack of interaction between PDTs can also be due to reasons other than competition. Mike agrees that it is due to the physical distance between the PDTs (business units) playing an important role. He claims that Marketing has been able to pick some tricks of the trade from IBM.COM because of being physically nearer to them than other PDTs. The sub-cultures interacting face to face could have helped to generate a conflict of ideas. According to Leonard-Barton (1995) this creative abrasion can positively influence performance. However, interaction between the sub-cultures must happen over a prolonged period (Newell et al., 2002). Creative abrasion across the PDTs thus has not taken place.

There is some interaction between some business units within IBM.COM:

"For example they would find an opportunity and they might pass it to the software business person, so the person here will be on that opportunity as will the software business person, they will both be on that opportunity as identifier and owner of the opportunity. So the software business person will then be engaged with the customer, speaking to them on a regular basis to deal with that opportunity and then they will talk, interact, to say how this opportunity is progressing." Mike Cope

The above interaction takes place because of the shared interest where a win-win (shared benefits) situation is an ultimate outcome. Both individuals sharing information in the above case receive an extrinsic reward in form of a bonus. The interaction results in a 'mutual high-obligations' type of psychological contract and generates a 'shared context for knowing' and ownership (Newell et al., 2002). Mike Cope further reports that in the above scenario of shared ownership, the ITSRs and Software Specialists make joint calls. They also share information and help each other in obtaining a success outcome of their shared effort. This is not however always the case:

"IBM is a very big company and it has lots of points of contact into a customer and all those points of contact into the customer aren't always aware of all the other points of contacts. So you've got a marketing person, they might not be aware that there's an ITR who's aligned to the account, a client manager and that there's two or three brand sales specialists who are currently working with that customer. So they can go and speak to that customer and not be aware of all this." Mike Cope

In any communication, the 'knowing of what others know' is a necessary component for co-ordinated action to take place (Bakhtin, 1981; Krauss and Fussell, 1991; Mead, 1934). The presence of a mechanistic competitive culture at IBM.COM has resulted in the lack of joint efforts and shared ownership, which in turn has resulted in duplications at IBM.

6.3.4.3 The interdependencies between subculture interactions, psychological contracts and knowledge sharing continue

The end-user involvement did not come until a later stage of the CRM Siebel implementation process and even then the development of CRM Siebel was not end-user driven. Below our respondent Paul Priddy expresses his frustration over his lack of involvement.

"We're the users, for god's sake someone up there speak to us! We have to use the tool on a day-to-day basis. We can tell you our likes, our dislikes. Let's have these round tables - let's take it to

the top and explain the difficulties that we're having, not only with the application which were little things, but also those things that support it on the back-end, mainly the customer database."

Knowledge sharing has increased to some extent. Previously there was some interaction between IBM.COM and Field Sales. The old systems (Marketing and Sales Management and Opportunity Management System) did not talk to each other. Our respondent, Mike, claims that the new system has increased the efficiency:

"The biggest sole major increase in efficiency and change was when the field sales reps came onboard to CRM. Up until then we had been using two separate sales management systems, so whereas before when we were on CRM they were on something called OM-Notes (Opportunity Management - Notes) and prior to that when we were on Emerson they were on something called OM System. The two systems didn't talk to each other, so it meant that every region, every country, had to have."

However it does not help the efficiency of the system if Field Sales do not use it at all:

"Field don't even put in notes whether they've seen a customer or not. And likewise Dublin, Dublin might put three words in there, 'Spoke to the customer.' OK, about what? Is the customer going to take it further? I've sent you an opportunity - at least give me a bit of information, how you got on with the customer. It is appalling!" Paul Priddy

Sarah Adams confirms the above and illustrates:

"The Field Sales, effectively, so when they came onboard they'd never really used it. And that's another problem. There's not a problem at all with the system. However people don't use it in the way it's meant to be used, and therefore the information's not there. The tools are only as good as the people who use them. It's a great repository for information and because we use it so often we put in

any contacts, any calls we have, data from what the calls were all about. However external field brands don't do that. They put the opportunity on but nothing else - it's great but it's also, it could be better. But that's not about the system - that's about people using it."

There is some interaction between GSMBs and Software Specialists because of the shared benefits. However, there is even less interaction between GSMBs and Sectors. Mike Cope states below:

"To a certain extent although there's really no business need, no benefit for them to really interact in that level. Obviously with all systems - same office, so people know each other and they might talk about various different products that they've been selling in to a customer, and how well it's worked etc, etc..... sharing best practice to that extent, but not sharing the information on the actual system itself."

Mike Cope suggests that overall knowledge sharing through best practices and tricks of the trade at IBM.COM is minimal:

"I'd say there's very little sharing of best practices in that way, to be honest with you because I'm not an out and out user of the system. There might well be that going on because it happens within the sub-cultures and between friends and informally and I might well not be aware of it, but it might well be happening in the management team."

According to Mike Cope; to a certain extent it could be the rigidity of the systems access. *"Because you had to be named on an opportunity to see it sometimes, and now because everyone's on the system, you might have someone from marketing might load an opportunity but not put you on it. So therefore there will be an opportunity on the system but you wouldn't actually be able to see it and so that is an inhibitor to some extent."*

The mechanistic culture and rigidity of the system does not allow for the tricks of the trade to get passed around frequently. The interactions where they happen are in a structured and rigid environment. Such interactions even on prolonged bases fail to overcome the power-based relationship barrier. Underlying psychological contracts tend to be of an imposed and 'employee under-obligation' type restricting the revealing of innermost feelings. Our respondent explains:

"Now the other side of it is the way that the CRM system is set up – is - there are a lot of processes surrounding that control - how issues and so therefore the actual ability to have, sort of, best practices, short-cuts where you're doing things is limited very much because it is controlled so intensely. I'm sure there are probably, some people bound, they'll always find some short-cuts or some way of doing something, but I think it is limited quite a lot." Mike Cope

There are control and monitoring mechanisms which, combined with a competitive business unit culture, allow very limited creative abrasion to take place (Leonard-Barton, 1995). A lack of creative abrasion and prolonged interactions between the business units at IBM.COM results in a knowledge silo environment (Iansiti, 1993; Newell et al., 2002). Knowledge in these silos does become sticky (Bartlett and Ghoshal, 1998). According to Nonaka, (1994) knowledge intensive firms, competitive advantage and product success are a result of collaborative, ongoing learning. Success depends not only on how effectively diverse individuals are able to organise and develop their unique knowledge competencies, but also how they can integrate and utilise their distinctive knowledge both effectively and synergistically (Nonaka, 1994). However, people holding information regarding any 'tricks of the trade' in the business units at IBM.COM would not share them freely. In a competitive environment such as above, non-codified knowledge hoarding may give the individuals a sense of job security and power (Davenport et al., 1998; Salancik & Pfeffer, 1977). However, our respondent further states that knowledge in form of the 'tricks of the trade' may get shared informally:

"Do we share best practices, these short-cuts etc, etc, - is there a team room, an intranet site or something, so people can find out that if you do X, Y, Z? (then you get through this a lot quicker).

There isn't like that, so any passing of that knowledge would be done in the smoking room, or having a coffee or within your team - things like that - and it will be very rarely passed across formally to any other part of IBM.COM, or outside to another PDT. So it will all be very informal - you know, my friend told me X, Y, Z - that sort of thing." Mike Cope

Interaction and knowledge sharing is more along the vertical than the horizontal axis. There is a limited interaction across PDTs and within IBM.COM (PDT1). Our respondent Mike further explains regarding different mindsets and frames at IBM. He projects the need for collaboration across the sub-cultures:

"But because you have different ways of working, I mean people in IBM.COM have one culture and PDT 5, for example, or marketing, have their own culture - when you merge these cultures there is going to be a clash, a cultural clash. Now are there any plans or are you working towards, are all these PDT's having the same idea like yourself when you talk to them? Do they think in terms, we going to merge together in the future, why don't we get to know each other more and have more co-operation?"

There is a need for active collaboration between the business units to enhance their performance and efforts towards developing a better customer service.

6.3.4.4 System integration has not helped subculture integration

IBM.COM is finding it hard to share best practices and 'tricks of the trade' due to the competitive nature by which people are primarily watching over their own opportunities. At IBM.COM the segregated rigid structure resists the CRM ideology of subculture integration which aims to facilitate knowledge sharing with shared understandings and psychological contracts of a mutual type. Our respondent elaborates:

"But it's again that we're coming back to this idea of CRM, the structure of CRM itself is integrated. Let's gather the knowledge. Whereas IBM still has this hierarchy that it has to follow, so it kind of contradicts this. Its in conflict with the CRM culture and as the CRM culture develops its going to take along time before the hierarchy start to flatten, and there will be more and more information spread out and be more balance of information sharing both horizontally and vertically." Mike Cope

Sarah Adams adds that 'tricks of the trade' only get transferred occasionally through informal information sharing conversations:

"Only if it comes up in conversation, but there's not a lot of work-arounds really to do because the system is quite rigid, you can't change what the system is, as it is off-the-shelf." Sarah Adams

Our respondent Paul Priddy has concerns regarding the company's image:

"Yes, but the thing is, is from how the system should be set up - the stroke of a few keys - it's there. My system, a stroke of a few extra keys, there's that 20 second delay - because you have to go into one screen, come out of that screen, into another screen. So we try to portray that IBM is the cutting edge - they've come up with e-business, they've come up with on-demand and all this, and here we are running with a... it is a..... don't get me wrong, it is an excellent application. There are a couple of little things that I don't like about it, but if the back-end is right, the front-end is brilliant, because it does what it's supposed to do."

Paul Priddy further argues and expresses his frustration over the quality of back-end data:

"If you are saying rightly, what you are saying is that if you have wrong information in the back-end, you are sitting in the front-end interacting with the customer, you're bringing up the wrong sort of information to give to the customer. (Well effectively, the wrong information). Yes, because you might take a call from a customer you don't deal with, because for some reason he's got a direct line that

he's dialling to the person that he normally speak to - they might be on the phone, so it jumps to you, then you're in the wilderness, particularly with Now if it was straight forward ... 'Can I check the spelling of your surname? Christian name?' Press the button, whoosh, he comes up. He's got one template, that's it..... He's on the system ten times under different names!"

IBM CRM initiative expects the company to become more organic, more adaptable and a learning organisation. However, lack of prolonged subculture interactions, 'shared context for knowing' and 'mutual high-obligations' psychological contracts across the business units in a mechanistic culture act as inhibitors to developing a learning organisation type of environment. Krogh, G. et al. (2000) describe how effective knowledge creation depends on the physical, virtual and emotional context of an organisation. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. It can be that the inability of an individual to deal with a new situation, new event, new context such as CRM Siebel or new information, is an obstacle to knowledge creation. IBM needs to pursue actively the work context as a learning organisation where the individuals in different PDTs are attuned to learning new things. Learning implies encountering and assimilating new facts. Differing cultures within an organisation also affect the efficient sharing of knowledge. These cultures can arise from different educational backgrounds, differential interests, expectations and power (Long and Fahey, 2000). The differing opinions and cultural diversity presents an excellent opportunity for creative abrasion at IBM.

6.3.4.5 Psychological contracts and knowledge sharing

We learned from the previous analyses that there was some 'mutual perspective taking' that took place at the senior management level. As the people at that level of hierarchy shared their cognitive frames regarding the particularities of CRM Siebel their shared benefits and mutual understanding led to 'mutual high-obligations' types of psychological contracts. Furthermore, this was also repeated at the end-user level. The interaction between GSMBs and Software Specialists had also shared interests and mutual benefit, bringing the two groups close in their working relationship. This also gave rise to

‘mutual high-obligations’ types of psychological contracts. Based on mutual and not imposed psychological contracts they were then willing to share their innermost feelings and secrets with each other in order to achieve a successful outcome. The ‘mutual high-obligations’ type of psychological contract based on shared benefits helped to facilitate the sharing of ‘tricks of the trade’. On the contrary the interactions between the management and end-users prior to CRM Siebel deployment, even though on a prolonged basis, were not able to expose the data misfit issues. In these power based formal interactions innermost feelings were not revealed and psychological contracts were predominantly imposed and ‘employee under-obligation’ type.

There is some prescriptive knowledge shared over the web through the CRM Website and online team-rooms (Iansiti, 1993). People from IBM can log in and access information available on CRM Siebel. They can also ask questions and get answers from the web administrator. According to Alison Hogg, there is nothing available at a local level to facilitate knowledge sharing across the PDTs and business units within them. Moreover, not everyone at IBM.COM has access to the online team-rooms. Strong hierarchical enterprises prevent smooth cross-functional communication and consequently inhibit cross-functional cooperation or knowledge sharing (Nonaka, 1994). The rigid organisational structure does not allow a free sharing of knowledge at IBM.COM.

Alison Hogg illustrates further with regard to access to team-rooms:

“No, not unless we give them access. But we have team-rooms and work-rooms. Work-rooms are only a certain amount of people can go in and put information in them, and for everyone else it’s just as a repository to read information. Then you have team-rooms and team-room pluses, dependent on the access people are given - depends on whether they get ‘read only’, ‘author’ or ‘edit’, and they can put comments in and that kind of thing.”

The research on social information processing (Salancik and Pfeffer, 1978), power (Pettigrew, 1973; Pfeffer, 1980), specialisation (Burns and Stalker, 1961; Daft and Lengel, 1986; Lawrence and Lorsch,

1967), and organisational cultures (Gregory, 1983; Riley, 1983; Pettigrew, 1979; Schein, 1985; Strauss, 1978) further suggests that people tend to share assumptions, knowledge, and expectations with others with whom they have close working relationships. Some tacit/non-codified knowledge in the shape of 'tricks of the trade' does get shared in the teams and with people who are physically close by at IBM.COM:

"I suppose I'd say that, for instance, if I'm looking for a customer and I type in, for instance, British Homestores and BHS and I just can't find them on Siebel, I might look up on a different system, like my spreadsheet, and say, 'Well they must be on Siebel. I've got five customer numbers for them, so I'll search by customer number.' Now that sort of information, I guess, that I would share with my immediate team - but there'd be many other users across the other side of the floor and other countries that I wouldn't share it with. But I'd say anything that is a short-cut we would share amongst our immediate team, but someone diagonally across the other side of the room is not going to get that knowledge." Katherine Duffy

As the distance between the individuals and business units increases, the opportunities for prolonged interactions decrease accordingly. In relation to CRM Siebel there is no simple round table which could facilitate interaction and discussions round CRM Siebel and allow end-users to share codified (descriptive and prescriptive knowledge) and non-codified/tacit ('tricks of the trade') types of knowledge. This table could act as a neutral platform where people would feel less threatened and could share the 'tricks of the trade' around CRM Siebel in order to maximise their performance.

Some descriptive and prescriptive knowledge gets shared only through vertical silos because of the vertical reporting structure at IBM. Any 'tricks of the trade' may get reported to Lisa Blake the CRM Focal Point Co-ordinator and she in turn can pass them on to the next level of hierarchy. This results in some knowledge residing in the vertical silos without travelling along the horizontal axis. However, there is knowledge sharing through informal channels that travels in all directions. We discuss this under the next heading.

6.3.4.5.1 *Sharing of 'tricks of the trade' through invisible colleges based on 'mutual high-obligations' psychological contracts*

We found that 'tricks of the trade' do get shared, however, through informal contacts within and outside the sub-cultures. Paul, an end-user, uses the expression *'scratch my back and I'll scratch yours'* to illustrate the presence of invisible colleges at IBM.COM. It also illustrates the fact that reciprocal relationships with 'mutual high-obligations' types of psychological contracts act as vehicles to the sharing of 'tricks of the trade'.

"I've gone through the back door and I've got to use my own personal network of people..... and when I've not been happy with something, or the record is totally incorrect, I've done the same thing. I've said, 'Give us a ring I need your assistance here.' We've gone through three or four changes or consolidations - he's done it at his end because he's in a position to do it - I haven't had to get any authorisation." Paul Priddy

"I mean it's humans we're dealing with, not machines." Annalise Marshal

People use their informal networks and give favours to each just as Paul Priddy said, *"I will scratch your back if you scratch mine."* Issues do get resolved through these informal networks or invisible colleges.

"We do actually have to be a bit creative because otherwise we wouldn't actually, in the sales environment, get anything done at all, and that's something that everybody does. We don't break business, we don't trade audit, we work on our own and it is much more of an informal process. For example there's two teams within Software, there's another team leader, and we work together, for example on data quality perspective." Annalise Marshal

Knowledge sharing through invisible colleges may also result in knowledge hoarding silos because people are not aware of each other due to lack of interaction and explicitness of contacts as stated by one of our respondents:

"The gurus will always pass ['tricks of the trade'] to the gurus." (Donna McGeady)

Such 'invisible colleges' give rise to a new subculture – a 'guru culture' – which may be even more isolated than other sub-cultures and can act as a clique hoarding the 'tricks of the trade'. Individuals within these cliques have a strong 'mutual high-obligations' type of psychological contract, but may not want to share their knowledge more widely in formal settings thus weakening the organisational architecture. Hence knowledge in this case becomes sticky and a symbol of power (Davenport et al., 1998; Salancik & Pfeffer, 1977; Sutton, 1999).

6.3.4.5.2 Knowledge sharing through moaning

According to Kunda, (1991 b) an informal setting may facilitate the sharing of non-codified knowledge in the form of 'tricks of the trade'. Our respondent verifies this:

"We do talk about it, it's inevitable. IBM's fully like that - a lot of my friends, because I'm not from this area, and all my friends outside work are IBMer's. You do slip into the business conversation and we also talk about CRM. And yes, I suppose people might come up and say, 'I've had a nightmare day today.' You say, 'Well why's that?', or 'Bloody Steve!', or something like that. But, yes, you do - you don't avoid it. We try not to, but we do." Annalise Marshall

Not everyone likes to talk about work on informal occasions though:

"It's not really something I try and talk about really, if I can help it. It's not a debate we have, like some work, it's something we use - and we get on with it. You can tend to find within the environment that you sit in that you can hear someone say, 'What are we doing with this? It's not working.' And

you'll find other people will say, 'I know what to do with that,' or 'That's not working for me either.' - because we work very closely in our environment." Sarah Adams

The above shows that informal settings as argued by Kunda (1991b) do not always facilitate the sharing of the 'tricks of the trade'. Especially, if a work environment is stressful, individuals may see informal interactions as a step back from the stressful environment. However, others in our case saw it as a place to complain and through this 'moaning' some 'tricks of the trade' got shared.

6.3.4.6 Summary regarding interdependencies between sub-culture interaction, psychological contracts and knowledge sharing:

The interaction at the senior management level was based on shared benefits and a mutual understanding, giving rise to 'mutual high-obligations' types of psychological contracts. Decision to take on board CRM Siebel was made by three senior executives at the top. The decision then trickled down to the middle management levels that were given the implementation task. There was no end-user involvement in the decision making process. Furthermore, no external user involvement was considered.

Subculture interaction was also limited between the middle management and end-users. The interaction was more formalised within a mechanistic framework. A 'mutual high-obligations' contract learning organisation environment was absent. Double entries occurred at an ongoing basis at the end-user level as a result of lack of subculture interaction. End-users do not trust the system. Their low trust leads to not everyone using the system. Mistrust in CRM Siebel is mainly due to the data issues, in particular the double entries which slow down their service to the customers thus impeding their performance. Furthermore, the end-users perceive CRM Siebel as a forecasting tool for the management whereas management perceive CRM Siebel as facilitating end-users' interactions with the customers. Differing perceptions show that a mutual perspective and 'shared context for knowing' between the management and the end-users does not exist.

The fact that not everyone uses the system with its mechanistic rigid organisational structure, leads to 'tricks of the trade' remaining buried inside the departmental/business unit silos. There is no system available at the moment which could facilitate interaction between the PDTS and business units within IBM.COM in relation to CRM. In this context the sub-sections do not have a neutral platform/round table where prolonged interaction leading to creative abrasion can take place. Moreover the competitive nature of their jobs does not allow such interaction. As a result end-users within and across subsections don't share information regarding opportunities. The psychological contracts existing between the subunits are more of 'mutual low-obligation' type. Consequently knowledge sharing suffers - implicit and explicit, codified and non-codified. Due to a strong vertical reporting structure, which has resulted in power based relationships at IBM.COM, knowledge hoarding has occurred in vertical silos. In addition to this, knowledge was not being shared freely along horizontal axes due to the mechanistic organisational structure, competitive nature of the job, and the lack of face to face interaction.

The lack of interaction between the business units at IBM.COM Portsmouth, due to competition and confidentiality, also results in double entries. Some of the double entries are captured by the reports that management pulls out while compliance testing. However as per 2004 no reports have yet been pulled out directly from CRM Siebel. There are plans to develop further CRM Siebel analytics. Duplication of entries is also related to duplication of effort and the time spent in gathering the information. User commitment is negatively affected by the stress caused by duplication and double entries. Management, however, considers double entries as errors made by the end-users. The psychological contracts as a result of the above between the IBM.COM management and the end-users were of 'employee under-obligation' type.

IBM.COM is finding it hard to share best practices and 'tricks of the trade' due to the competitive atmosphere in which people are watching over their own 'opportunities'. Segregated rigid structure resists a CRM ideology of subculture integration which can eventually facilitate knowledge sharing with shared understanding and 'mutual high-obligations' types of psychological contracts. IBM.COM

management admits the need for active collaboration between the business units in order to enhance their performance and improve customer service.

There is some knowledge sharing through informal channels that travels in all directions through which 'tricks of the trade' do get shared across the sub-cultures and hierarchies. People use these informal networks and may also exchange favours. A 'Guru Culture' is born as a result and becomes a knowledge silo in itself. Knowledge becomes sticky and resides within the elite 'clique' type guru culture. It is shared between the 'gurus' due to their 'mutual high-obligations' contracts. Apart from guru to guru sharing there are also informal occasions and gatherings where some 'tricks of the trade' get shared. However other people try to avoid talking about work in these social gatherings in order to escape from their work related stress.

Our analyses have investigated the interdependencies between subculture interactions, psychological contracts and knowledge sharing. Our investigation of the contemporary situation at IBM.COM revealed that prolonged interactions with mutual perspectives and shared benefits are associated with 'mutual high-obligations' types of psychological contracts, which in turn facilitate the sharing of 'non-codified/tacit knowledge in the form of 'tricks of the trade'. In our example imposed or 'employee low-obligation' types of psychological contracts were linked with sporadic sub-culture interactions and lack of a shared mental space. For an overview of our analysis see figure 6.7.

6.4 Case Conclusion

This chapter set out to present a chronological description for the period 1999-2004 with a thematic account of IBM's initiative to deploy a CRM Solution to promote system integration. It used the previously stated refined analytic framework to go into detail and discussed the history, context and content initially in an interpretive narrative (Part 1). It then used the 'Process' part of the framework to carry out a within-case analysis of the implementation and post implementation environment at IBM.COM (Part 2).

Part 1 told the interpretative narrative of the events that took place during the period of 1999-2004 at IBM whereas Part 2 investigated the process of implementation doing critical analyses. The analyses were carried out using data from the final 16 semi-structured in-depth interviews which were also taped. The critical analyses linked the statements from our respondents with relevant theories from the literature. We also made use of some historic data and notes from participation in staff meetings including observations made. The access to some historic documents helped us to understand the rationale for taking onboard CRM Siebel. It was one of the eleven attempts to integrate the segregated parts of IBM. IBM also intended to give their customer an image of a unified IBM and a 'one-stop-service'. The market was getting competitive in terms of customer service. Customers were becoming more focussed towards integrated services. Everyone in the market was trying desperately to achieve so called 'one-stop-service' target integrating solutions, services, products and technologies. IBM wanted the network computing to drive the next phase of industry growth and this also became the company's overarching strategy. The IBM CRM era had started.

This chapter has focussed on the implementation of CRM Siebel at IBM.COM Portsmouth. It has taken a close interest in the post implementation environment at IBM.COM Portsmouth in order to investigate further the adaptation and acceptance of the system by its users from a knowledge sharing perspective. It builds on the pilot chapter which was focussed primarily on the implementation process of CRM Siebel at IBM.COM.

The decision to take CRM Siebel onboard was made at the senior management level and the system was implemented using a top-down approach without any consideration being given to end-user or external customer involvement in the 'decision making' process. Support groups, development groups and deployment groups were formed to facilitate the smooth run of the operation. However, they were not able to expose the data misfit issues at IBM.COM Portsmouth. All the six subsections at IBM.COM went live simultaneously. According to the end-users it was an attempt to standardise numerous data bases in order, better to monitor and control their interactions with the customers. Management however hoped that the system would facilitate the end-user's interactions with

customers and thereby enhance their performance and the quality of customer service. However, due to several data misfit issues, which were ignored during the implementation, the use of the system has become a stress factor. CRM legacy data was in a poor state. However, this was not discovered until the data migration began.

End-users are stressed and feel pressured to use the system, which has the effect of reducing their commitment and ownership. Not everyone uses the system and duplication and double entries happen frequently. Due to the vast mechanistic organisational structure end-user issues take a long time to receive a feedback. This has led to people finding work-arounds in the form of social networks, to cope with issues arising from their use of the system - invisible colleges in the form of an elite 'guru culture' have emerged. These gurus, however withhold their knowledge of 'tricks of the trade' to ensure job security and power.

End-user involvement at the floor level came at a later stage according to Jane Walsh, a 'super-user'. Super-users at IBM.COM at North Harbour UK were selected by IBM.COM managers when Patrick Walsh from IBM USA came down to facilitate the implementation, six months after the signing of the contract: A shared context for knowing and 'mutual perspective taking' did not happen fully due to the competitive nature of jobs at IBM.COM (Boland and Tenkasi, 1996; Newell et al., 2002). Furthermore, the real content of an apparently mutual perspective was not allowed to surface or be challenged. Thus interpretations which could shake the illusion of consensus regarding data issues between stakeholders were avoided (Gee, 1992).

The achievement of a new definition of the situation in which all participants can share has yet to take place at its full capacity (Habermas, 1979). Moreover, the updates were more like 'kick backs' (as expressed by our respondents) as the users were not even comfortable with the previous versions when the new releases arrived. As a result the psychological contracts between the management and end-user were of 'employee low-obligation type'. The low-obligation contract resulted in end-users finding and sharing work-arounds which in turn gave birth to a 'guru culture'. Knowledge sharing, in

particular the sharing of 'tricks of the trade', was minimal between management and end-users. Also, there was minimal sharing of 'tricks of the trade' between the business units.

Although a prolonged interaction took place between the team that worked closely with processes and business units prior to CRM Siebel deployment, there was an illusion of consensus regarding the state of legacy data. IBM realized the poor state of their data only at a later stage. The innermost feelings of the end-users regarding the quality of data were not exposed at an early stage. Furthermore, on occasions when interactions did take place, the settings were more formal and people did not expose their innermost feelings. According to our respondents where the innermost feelings were revealed the feedback from the management was minimal. In the above case the relationships were power based and imposed. As a result a 'mutual high-obligations' contract was absent. However, there were instances when people across the business units had a mutual understanding and a mutual perspective which enabled close interactions (Boland and Tenkasi, 1996). The so called 'T-shaped skills' were developed as a result of joint efforts to obtain a successful end result (Iansiti, 1993). This developed 'mutual high-obligations' types of psychological contracts and facilitated the sharing of innermost feelings and 'tricks of the trade' as the outcome was in shared benefits for both parties.

This chapter suggests that psychological contracts play an important role in knowledge sharing, particularly the sharing of non-codified or tacit knowledge in the form of 'tricks of the trade'. It also suggests that imposed psychological contracts ('employee under-obligation') tend to promote power based relationships (Shore and Barksdale, 1998) but may result in sharing of some descriptive and prescriptive knowledge. However, an 'employee under-obligation' type of psychological contract does not facilitate the sharing of innermost feelings and 'tricks of the trade'. Explicit elements of psychological contracts between senior management and end-users included a sense of obligation to work, and job security issues. Importantly, implicit elements of psychological contracts remained hidden (Makin et al., 1996) producing illusions of consensus, which influenced and inhibited the adaptation and acceptance of CRM Siebel. As a result data issues became a major stress factor for the end-users at IBM.COM.

Upon investigating micro mechanisms (in our example the psychological contracts) underlying the development of ‘mutual perspective’, ‘shared mental space’, ‘T-shaped skills’ and ‘knowing of what others know’, we found that these psychological contracts inhibit or facilitate the sharing of ‘tricks of the trade’ across the sub-cultures. Furthermore, psychological contracts, subculture interactions and knowledge sharing have strong interdependencies. Our example shows that where the psychological contracts were weak, the interactions and knowledge sharing were both limited, particularly the non-codified/tacit knowledge sharing. For an overview see figure 6.8.

According to our respondents at IBM, CRM Siebel was an effort to integrate the segregated IBM processes. However they missed the cultural integration. By the end of 2004 IBM were at the adaptation and acceptance stage where IBM were trying to develop the system further, to promote the integration, and streamline the processes as much as possible. The impact of knowledge sharing on the ongoing process of implementation is of high importance to the organisational promoters of CRM Siebel, as is the building of improved ‘mutual high-obligations’ type psychological contracts based on optimal utilisation of the system. The research at IBM.COM has sought to extend the analysis of IT implementation to CRM systems, and to include in that analysis knowledge issues – including tacit knowledge sharing in form of ‘tricks of the trade’, knowledge silos and psychological contracts. A longitudinal approach has elicited how contextual, cultural, political and structural factors have influenced propensity to share knowledge and pursue common cause in the CRM implementation and use at IBM.COM, North Harbour, Portsmouth and the factors that could alleviate knowledge bottlenecks and facilitate more optimal utilisation of the system. Our research has concluded that knowledge sharing issues, and what gives rise to them, are highly significant factors underlying the optimisation or failure of a system in the light of its different stakeholder’s interests.

In the following chapter we present a cross-case analysis comparing the ‘process’ element from both cases. The deviating patterns and similarities in the adaptation of CRM systems are investigated and compared in order to gain further insight into the linkages between knowledge sharing, subculture interaction and psychological contracts in a CRM environment.

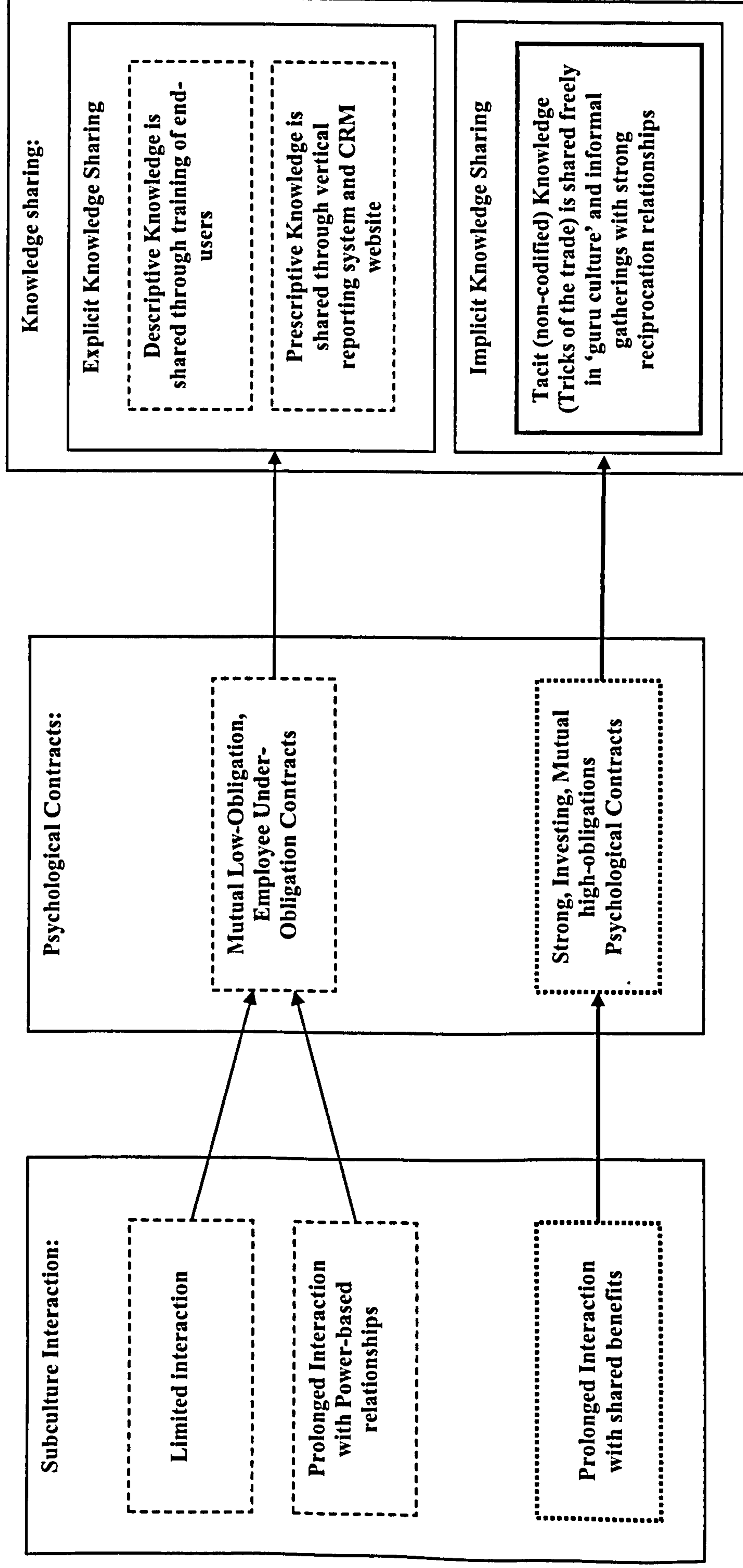
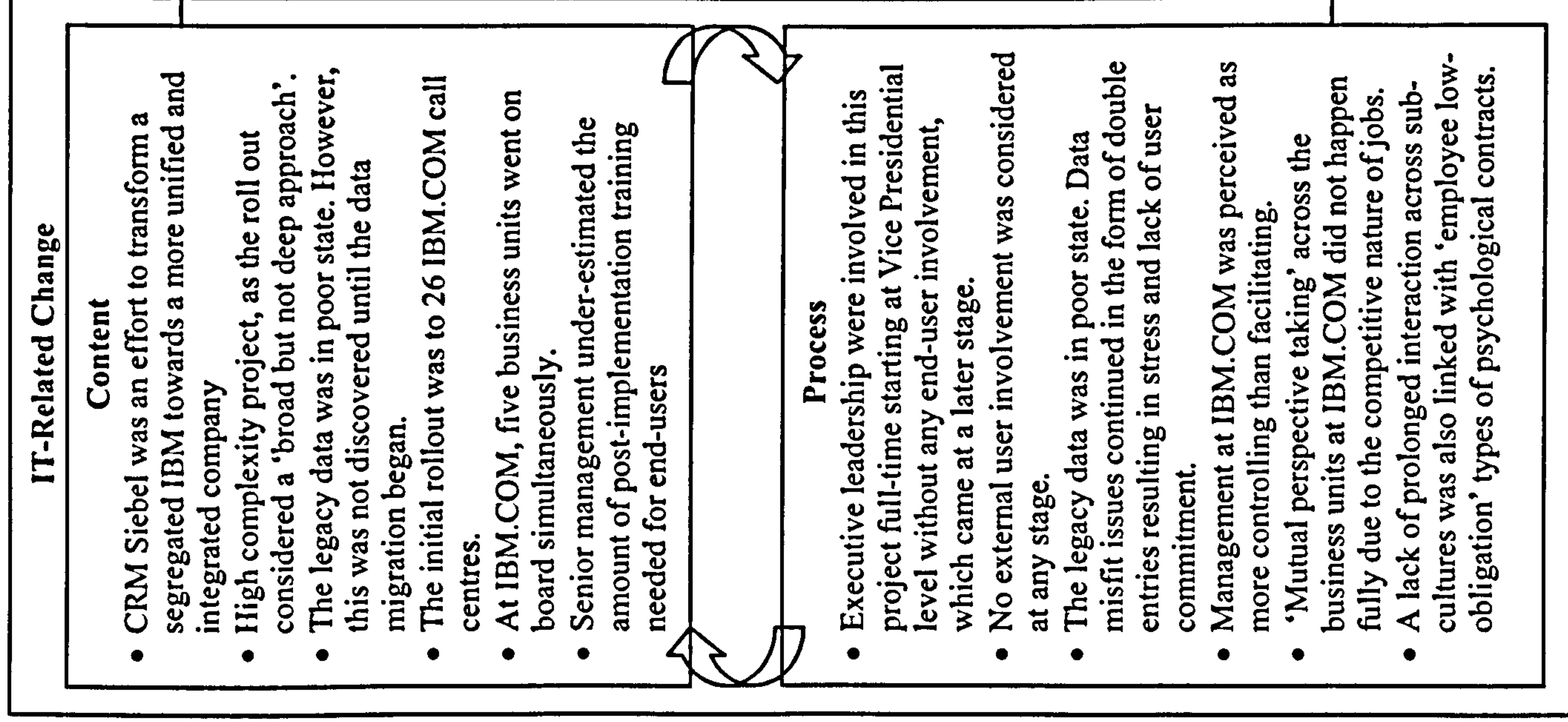
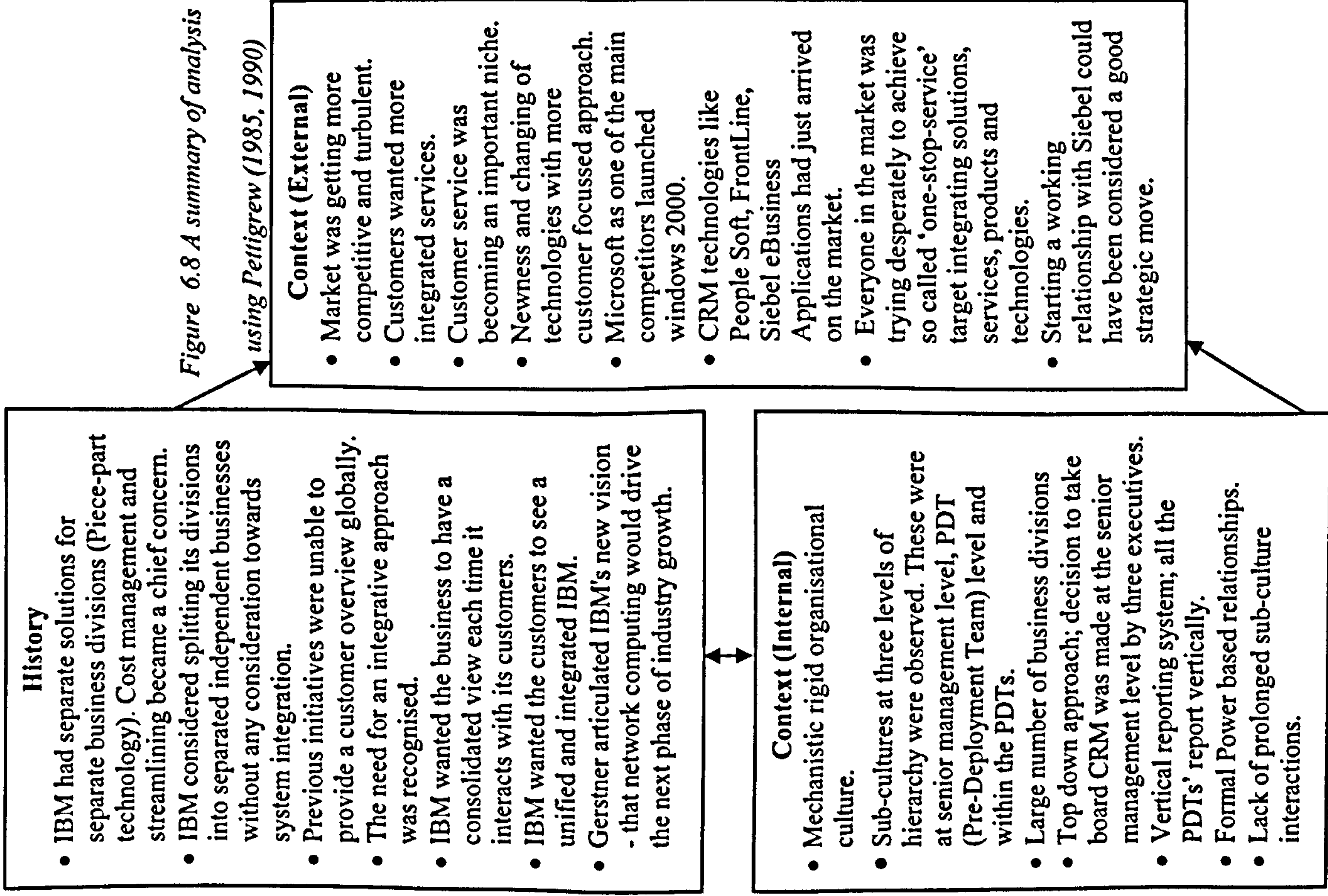


Figure 6.7 Interdependencies between subculture interactions, psychological contracts and knowledge sharing, showing Psychological Contracts playing a key role in sharing of 'tricks of the trade'



Chapter Seven

Cross-Case Analysis

BCC v IBM

7.1 Introduction

This chapter analyses the research findings from both cases in the light of the reviewed literature. The framework previously used in within-case analyses is utilised to discuss deviating patterns and similarities from both research sites. The deviating patterns and similarities in the adaptation of CRM systems are investigated and compared in order to gain further insight into the linkages between knowledge sharing, subculture interaction and psychological contracts in a CRM environment. The analysis is carried out as depicted in Figures 1 & 2, using our refined framework, together with Willcocks and Harrow (1992). Initially we discuss and compare the 'Process' in part 1 of the analysis. In part 2 we analyse similar and deviating patterns, discussing our findings and relating them to distinctive contexts from Willcocks and Harrow's framework, in the light of our reviewed literature. The section concludes with a summary of the analytical findings.

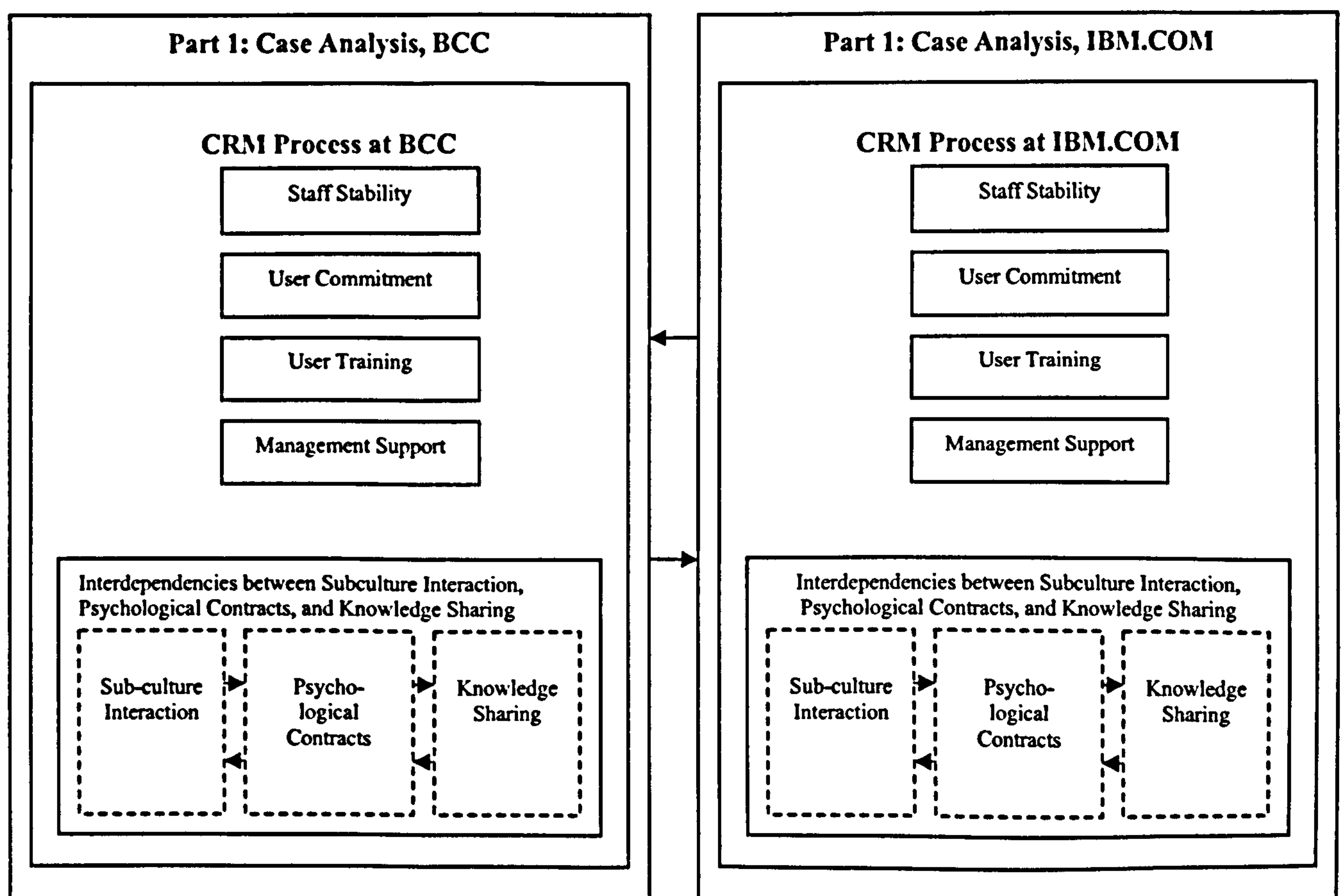


Figure 7.1 Framework comparing the 'Process' at both research sites

Our refined framework adopted from Pettigrew's (1985, 1990) six categories model continues to contribute in developing a deeper insight into the contemporary situations and understanding the phenomena at our research sites.

Part 2: Case Comparison using Willcocks and Harrow 1992,

- Differential customer base; as both the organisations have a differing clientele
- Differing goals; social goals vs. profit goals
- Complex and debated performance indicators vs. mainly quantitative financial measures
- More ill defined policy directives; complexity of policy implementation vs. relatively less ambiguous policy
- Relative openness of government and decision making; stress on representatives vs. relative secrecy; stress on business confidentiality
- Wide stakeholder base vs. primary focus on shareholders
- Extensive accountability vs. restricted accountability
- Primary resource base from public taxes vs. primary resource base from operational returns and borrowing
- Multiple values and goals; service, public interest, equity, professionalism, consumer participation,
- Complex trade-offs vs. relatively restricted
- Statutory and parliamentary regulation; codes of conduct vs. board of directors; company planning frame works
- Needs of national economic management vs. market place signals, e.g. business lending rate

Figure 7.2 Framework for the comparison of deviating factors at both research sites

7.2 Part 1: Process Comparison

Under this section we discuss the ‘Process’ from our framework as shown in Figure 7.1. We critically analyse and compare staff stability, user commitment, user training and management support. We have combined user commitment and staff stability in our analyses because of their interdependencies. In addition to that, we also compare and analyse the interdependencies between subculture interactions, psychological contracts and knowledge sharing at both sites. We conclude this section with a summary.

7.2.1 Staff stability and user commitment at BCC and IBM.COM

Under this section we discuss the staff stability and user commitment. These are amalgamated because of their closeness and interdependency. Similarities and dissimilarities regarding staff stability and user commitment are discussed, critically analysing the phenomenon at both sites in the light of the relevant theories from our refined literature review.

Staff stability suffered heavily at BCC and the CRM project became ‘a ship no one wanted to stay on’. The project ran into difficulties at an early stage after an illusion of consensus was shaken by discussions in the steering group meetings, resulting in a negative abrasion (Gee, 1992; Leonard-Barton, 1995). The CRM project became unstable due to the lack of shared understanding and shared mental space/context of knowing at the senior management level. There were open arguments regarding the strategic focus. The stakeholders at senior level perceived the usefulness of the CRM system differently. A synergy regarding the purpose of deploying CRM systems was lacking (Bakhtin, 1981; Krauss and Fussell, 1991; Mead, 1934) and ‘knowing of what others know’ made matters only worse. The project changed focus from a system integration approach towards a ‘call answering’ one early on during its design and development stage. The ‘call answering’ approach was predominantly driven by a political agenda (as the public was complaining about its calls not being answered). People started to leave the project at an early stage and stakeholder commitment to see through the CRM FrontLine project hit a decline. The end-users, particularly secondees leaving the Vertex managed Contact Centre, were happy to leave the place due to their lack of commitment to CRM FrontLine. Their contract agreement did not

allow them to be upgraded to a team leader position. Moreover they had much stronger 'mutual high-obligations' types of psychological contracts with their back-offices and decided to move back (Shore and Barksdale, 1998).

In comparison, at IBM, there was initial senior management support to spreading an integrative culture through using a CRM system. Executive leadership was involved on a full-time basis starting at Vice Presidential level. However, senior management did not understand the technical and cultural complexity of the project at an early stage. This resulted in data misfit issues. Moreover, senior management perceived the system as facilitating customer service and presenting a unified IBM to its customers. The end-users saw it as a forecasting tool for the management. There was also an illusion of consensus regarding the state and quality of legacy data (Gee, 1992, Ross et al., 1977). This illusion continued and as a result data misfit issues affected the user commitment negatively at IBM.COM. The end-users, moreover, perceived the system as being too rigid and slowing down the speed of their service to the customers instead of speeding it up. The updates to the CRM system were perceived as 'kick backs'. Even at a later stage end-user involvement was limited which caused a lot of frustration and stress. The mechanistic and rigid organisational architecture did not make things easier either. Thus at both sites a learning organisational type of environment with reciprocity of relationships was missing (Krogh, G. et al., 2000).

Both CEOs left before the completion of deployment of the CRM systems at our research sites. The decision to deploy CRM was made at the top end at both sites. At BCC Sir Michael Lyons saw a CRM system in Brisbane and after his return wanted to introduce one for BCC. At IBM it was Lou Gerstner's eleventh integration initiative as CEO to integrate the segregated business units of IBM. CRM projects at both sites were implemented using a top down approach without any end-user involvement in the decision making processes. No external user involvement was considered. As a result end-users did not feel any ownership of the project and felt stressed. At BCC they eventually started to leave the Vertex managed contact centre, whereas at IBM.COM this gave rise to the birth of a 'guru culture'. The end-users at both sites felt under compulsion to use the system and many chose not to do so. As a result their

commitment to the system suffered. The end-user psychological contracts at both sites were of 'employee under-obligation' in type. User commitment was also affected by the technical issues arising at both sites. At BCC it was the lack of system integration with the back-office and at IBM.COM the double entries which respectively slowed down the end users in serving their customers effectively.

There was some prolonged interaction at the senior and middle management level at both sites. However, the psychological contracts were different. At BCC stakeholders at senior management level lacked unanimity regarding the perceived purpose of the CRM project. Their differing perspectives resulted in negative abrasion and lack of 'mutual perspective taking' (Boland and Tenkasi, 1996). Their psychological contracts as an outcome of the above were predominantly of 'mutual low-obligation' type (Shore and Barksdale, 1998). At IBM on the other hand, there was shared and mutual understanding regarding the purpose of CRM Siebel at senior management level. This resulted in 'mutual high-obligations' types of psychological contracts (Shore and Barksdale, 1998). Furthermore, the interaction took place in a non threatening environment enabling stakeholders to agree, resulting in shared mental space/'shared context for knowing' and shared benefits.

To summarise the above, staff stability was poorer at BCC compared with that of IBM at the senior management level. However, both sites lost their CEO before the completion of the project. End-user involvement was missing and external user involvement was not considered.

End-users at BCC decided to leave and go back to their back-office positions in order to get away from the Vertex managed contact centre. At IBM.COM end-users found their own work-arounds through social networks using their invisible colleges, giving rise to a 'guru culture' (Orlikowski and Tyre, 1994; Orlikowski and Iacono, 2001). User commitment at both sites was low, even lower at BCC as the secondees did not even want to stay in the CRM project. The end-users at both sites established 'employee under-obligation' types of psychological contracts with the management as they felt compelled to use the system. They also perceived the system to be more controlling than facilitating in

nature. A learning organisational type of environment with reciprocity of relationships was missing at both sites.

7.2.2 User training

Under this section we discuss the end-user training and its impact on the CRM project 'Process'. We compare the user training at both sites and critically analyse its impact on the end-users performance. We also discuss the training duration, its adequacy and any other quality issues arising from the training.

The user training given at BCC was by an outsourced organisation namely Vertex which also managed the Contact Centre for BCC. Training provided by Vertex did not impress the BCC secondees and management. Vertex did not have enough knowledge about BCC and its sub-cultures. Vertex interactions with BCC were not on a prolonged basis and did not allow creative abrasion to take place (Newell et al., 2002; Leonard Barton, 1995). Following Boland and Tenkasi (1996), this resulted in a training which was not based on 'mutual perspective taking'.

At BCC there was an agreement at senior management level between BCC and Vertex that established a mutual psychological contract (Shore and Barksdale, 1998). This agreement was not shared by secondees. Secondees brought with them an immense wealth of experience regarding the BCC culture in a non-codified form which was not exploited to its maximum capacity (Leonard-Barton and Kraus, 1985). Moreover where the secondee expertise was exploited, it was done without providing any extrinsic reward, which resulted in 'employee low-obligation' types of psychological contracts between the Vertex management and BCC secondees (Shore and Barksdale, 1998). There was also a 'we and them' culture between secondees and non-secondees. Secondees as per end of 2004 were leaving the Vertex managed contact centre and going back to BCC where they felt at home. Their loyalties continued to lie at BCC (Janssens et al., 2003).

Training at BCC was only three to four weeks long and was different for secondees as compared with non-secondees. At IBM.COM it was even shorter. Super-users were first trained for two and a half days on the system and then used as trainers to train the rest of the end-users. The super-users were used to influence the attitudes and perceived usefulness of the end-users of the system (Davis, 1989). Their brief was to convince people of the benefits of a completely new database and layout, a task they found difficult. This was partly due to the fact that they had yet to get their own minds set around what the new system could offer them. Trainers of the super-users were convinced that this was the right thing to do and apparently had an illusion of consensus with the super-users without understanding the whole picture. They did not see the mistrust in the system perceived by the super-users was going to be passed on to the other users. The so called 'T-shaped skills' and 'shared context for knowing' were limited (Iansiti, 1993; Newell et al., 2002). As a result many users - particularly from the Sales Section - did not use the system.

Management at BCC admits to the inadequacy of the training more openly. The CRM FrontLine training was provided by an outsourced company lacking in BCC cultural knowledge. Departmental managers including the CRM project manager expressed their dissatisfaction over the quality of training. At IBM comments regarding the short duration of training were made. However, IBM.COM still perceives that, given the short amount of time, they did well. End-users including super-users at IBM.COM openly expressed their feelings over the short duration and inadequacy of the CRM Siebel training (Pliskin et al., 1993).

Unlike BCC, IBM.COM took steps to involve the end-users in the user training process. A longer training duration could have helped the super-users to master the system and get their mind set around it. This in turn could have helped them to communicate the benefits of CRM Siebel more effectively to the rest of the end-users. BCC tried to exploit the non-codified knowledge possessed by the secondees when they realized that secondees did not want to stay at the Contact Centre anymore. A timely use of secondees' expertise in the training process could have helped in the sharing of experientially-based non-codified knowledge - in the form of 'tricks of the trade', work-arounds and shortcuts - between

secondees and non-secondees. Secondree involvement at an early stage could have resulted in enhanced user ownership and autonomy.

End-users at both our research sites were using the system under compulsion and were not convinced regarding its benefits. At both sites the end-users would have liked to have had a longer training duration. Our findings suggest that end-users interacting with CRM systems under compulsion and time constraints chose not to use the systems. Moreover, power based relationships only resulted in illusions of consensus at both sites; people did not reveal their innermost feelings and agreed only at the level of words (Gee, 1992; Leonard-Barton, 1995). The resulting psychological contracts were 'employee under-obligation' in type (Anderson and Schalk, 1998; Makin et al., 1996; Rousseau, 1995; Shore and Barksdale, 1998; Thibaut & Kelley, 1959).

In summarising the above, we find that training duration at both sites was short. It was much shorter at IBM.COM. At IBM.COM however, end-users were involved in the training process compared with BCC, where secondree involvement in the training process was minimal. The training did not impress the management at BCC and they criticised it very openly. While IBM management admitted the limitations of the training yet they perceived it to be sufficient. End-users at both sites criticised the inadequacy of the training quite openly. Furthermore, the end-users felt compelled to use the system. There was also an illusion of consensus between the super-users and their trainers regarding the usefulness and duration of the training. A prolonged training programme with effective involvement of end-users could have helped better to communicate the CRM Siebel benefits to the end-users at IBM.COM. At BCC, Vertex management could have been able to capture and exploit secondees' non-codified knowledge by involving them in the training process at an early stage.

7.2.3 Management support

Under this section we discuss the management support provided at both sites during implementation and post implementation phases. We critically analyse the support as perceived by the end-users of the systems at both research sites linking it with relevant theories from the reviewed literature.

Mintzberg (1987), and Orlikowski and Hofman (1997), suggest that people talk about strategies in one way, i.e. as a plan with fixed steps to achieve a known goal, while implementing them in another, more ad hoc way, to accommodate unforeseen circumstances. At BCC strong support was given to those who supported the ‘‘call answering’ focus’ strategy. This was due to the fact that the public was not getting through and politicians wanted this issue to be resolved as quickly as possible. Senior management including Tony Glew and Sarah Wood agreed to take on board CRM FrontLine at the level of words. Their innermost feelings when revealed showed differing mind sets and frames resulting in negative abrasion (Orlikowski and Gash, 1994). People were reluctant to share their frames and did not change their perceptions regarding CRM FrontLine strategy. The project changed its focus from a system integration approach towards a ‘call answering’ one. Business and IT were not aligned (Willcocks and Margetts, 1994).

Davidson (2002) argues that frames and shifts in frame salience (frames are cognitive structures or mental models that are held by individuals) influence sense-making during requirement determination. This study helps to provide an understanding of how interpretive power is exercised in an IS project. Moving on from frames to shared frames, Orlikowski and Gash (1994) show shared frames as closely related to the concept of sub-cultures. Individuals - drawing on their shared frames - engage in symbolic action and thereby construct a social reality that reflects their common assumptions, beliefs and understandings and that includes particular rules, rituals and customary practice. According to Geertz (1973) and Van Maanen and Barley (1985), sub-cultures rely heavily on cognitive elements such as common frames of reference. Sarah Wood’s supporters at BCC shared their frames and had a mutual, shared understanding. This was also the case with Tony Glew’s supporters. They also shared their

frames and had a shared understanding regarding an integrated solution, in which systems need to talk to each other, in order to provide a 'one-stop-service'. The two groups however, did not have a common shared frame (Davidson, 2002). The innermost feelings, when revealed instead of creating a shared understanding resulted in a divide between the partners (Leonard Barton, 1995).

Bloomfield and Vurdubaki (1994) highlight the problematic nature of the boundary between the "technical" and the "social" and its consequences in respect of understanding the relationship between technological and organisational change. The power shown by the technical experts needs to be balanced by bringing in the social part of the organisation. The knowledge shared at the senior management level regarding their innermost feelings created a negative type of abrasion between members of senior management and caused division based on different approaches and differential interests. The stakeholders with a system integration approach were classified as 'IT people' by the group that supported Sarah Wood. The group supporting Sarah Wood claimed to have the business perspective on the whole CRM situation. The above shows that differing perceptions not only created a divide but also had a negative affect on the implementation process of CRM FrontLine at BCC.

The survey done by Price Waterhouse (1991,1992) states that 47 percent of the IT directors in UK see that their main problem is the culture gap existing between IT and business professionals. Furthermore, 56 percent of IT directors believed that the culture gap is losing or seriously delaying IT opportunities for their companies to gain competitive advantage. Several authors have discussed the culture gap between systems analysts and computer specialists charged with information systems (IS) implementation and business users (Fincham, 1994; Grindley, 1992; Hinton, 1994; Kumar and Bjorn-Andersen, 1990). In an overview of the literature Willcocks, Petherbridge et al. (2003) corroborate the persistence of these types of culture gaps into the new century. At BCC the two differing perceptions created a sub-cultural divide which continued to affect the implementation of CRM project negatively at departmental and end-user level. At the departmental level managers perceived their senior management support in the project as poor. Poor management support was also perceived by secondees at the Vertex managed Contact Centre. Management there was not able to establish a 'mutual high-

obligations' type of psychological contract between them and the secondees and thus were not able to exploit the non-codified knowledge in the form of 'tricks of the trade' possessed by the secondees (Shore and Barksdale, 1998). As a result of 'employee low-obligation' type of psychological contract between secondees and Vertex management, the secondees decided to move back to their old back-office jobs at BCC. Differing employment conditions for the end-users resulted in issues like 'we and them' culture between secondees and non-secondees, creating yet another divide at end-user level. Secondees continued to maintain their 'mutual high-obligations' types of psychological contracts with their back-offices and expressed happiness over their moving back to BCC back-offices.

According to Orlikowski and Gash (1994), to interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it. While these interpretations become taken-for-granted and are rarely brought to the surface and reflected on, they nevertheless remain significant in influencing how actors in organisations think about and act toward technology. At IBM senior management support was predominantly unified. This led to the creation of deployment teams, working on a fulltime basis to assure the success of the CRM project. However, the Development team misinterpreted data misfit issues and perceived the data to be in a better state than was really the case. This in turn led to data migration issues. Furthermore, data misfit issues continued to cause trouble for the end-users in the form of double entries, duplications and duplication of effort. End-users openly expressed their distress over a lack of support regarding data misfit issues.

The rigid mechanistic organisational structure at IBM did not allow any 'creative abrasion' to take place during the pre-deployment phase. The prolonged interactions between the Development Team and the end-user were predominantly based on power based work relations and did not facilitate the development of 'T-shaped skills' (Iansiti, 1993). This resulted in people agreeing on the surface avoiding conflicts. The innermost feelings regarding the quality of legacy data did not get revealed. The resulting psychological contracts were of 'employee under-obligation' in type and did not facilitate the development of a mutual perspective (Boland and Tenkasi, 1996; Shore and Barksdale, 1998).

In a rigidly driven mechanistic IBM culture, feedback from the management regarding end-user complaints was minimal. According to our reports the management at IBM.COM were perceived as more controlling and monitoring than facilitating and enabling. Response time to end-user complaints was long and slow. Management perceived the CRM tool as facilitating end-users in their interactions with the customers. End-users on the other hand perceived it as a forecasting tool which was also used to control and monitor each move they made. The resulting psychological contracts were of 'employee under-obligation' in type highlighting a lack of mutual perspective (Shore and Barksdale, 1998). The end-users expressed their distress over a lack of management support regarding issues such as double entries, duplications and duplication of effort. They ended up finding their own work-arounds and making an effective use of their invisible colleges resulting in an elite 'guru' culture.

In both cases at BCC and IBM end-users used the system under compulsion and avoided using it in several instances when it suited them. At BCC there were instances when end-users made hand notes while serving a customer and later on entered the data on to the system to fulfil a need regulated by the system. At IBM.COM Sales Section decided not use the system at all making matters worse for the rest of the business units. At both sites the end-user psychological contracts with the management were 'employee under-obligation' in type not allowing the establishing of a mutual perspective and 'shared context for knowing' (Boland Tenkasi, 1996; Newell et al., 2002).

In summarising the above we conclude that management support at both sites was in general insufficient in several respects. IBM senior management were more unified in their approach towards the deployment of CRM Siebel than were BCC, where strong differing opinions and perceptions caused a sub-cultural divide which trickled down to middle management and finally to the end-user level causing severe staff retention issues. At IBM.COM the role of management became more controlling and monitoring than facilitating. The mechanistic organisational architecture made matters worse for the end-users. Feedback to end-user complaints had a long response time which resulted in end-users finding work-arounds using their invisible colleges. End-user psychological contracts with the

IBM.COM management were of ‘employee under-obligation’ in type and failed to create a ‘mutual perspective’ and a ‘shared mental space’.

Secondees at BCC decided to move back to their back-offices having retained a good relationship with their previous management there. Vertex management were not able to establish a ‘mutual high-obligations’ type of psychological contract with the secondees and did not exploit the non-codified knowledge possessed by the secondees regarding BCC back-offices. We conclude from our research findings that power based relationships and poor management support led to ‘employee under-obligation’ types of psychological contracts. We also found that end-users at IBM.COM stayed in the project discovering their own work-arounds through using their invisible colleges effectively. At BCC the secondees chose to leave and move back to their old jobs in the back-office.

7.2.4 Interdependencies between Subculture Interactions, Psychological Contracts, and Knowledge Sharing

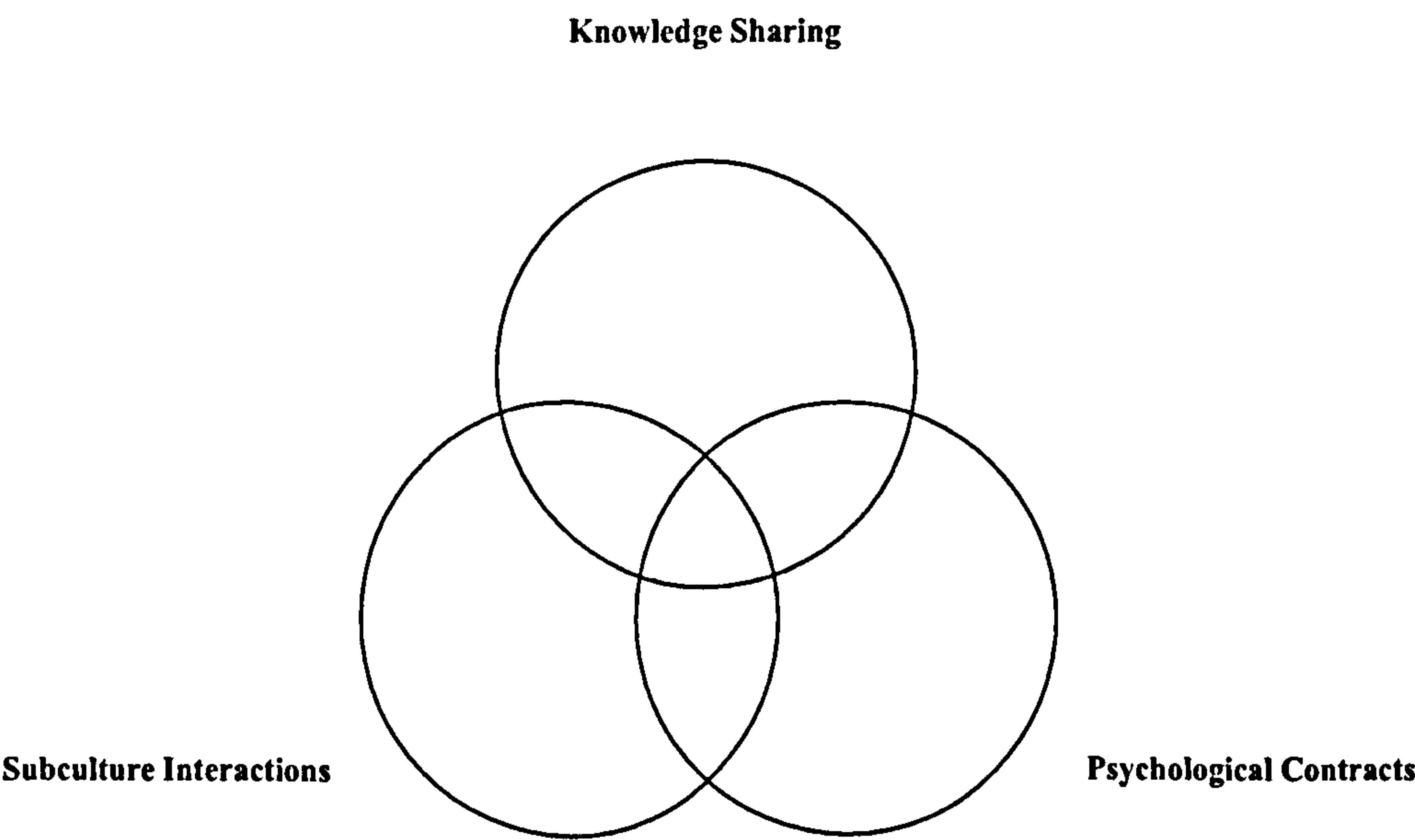


Figure 7.3 Interdependencies between psychological contracts, subculture interactions and knowledge sharing

In this section we discuss the interdependencies between subculture, interactions, psychological contracts and knowledge sharing at both research sites. We compare and critically analyse the similarities and deviations regarding the types of psychological contracts and subculture interactions and their implications on knowledge sharing. We do this in the light of our reviewed literature and link our discussion with relevant theories. A special focus is given to the sharing of less codified knowledge and how it gets shared across the sub-cultures at both sites.

Prolonged subculture interactions at senior management level were limited at both sites. At BCC interactions at senior management level resulted in negative abrasion furthering the subculture gap between the social and so called IT domains. The resulting psychological contracts were 'mutual low-obligation' in type. The sub-cultural gap continued to haunt the project life cycle even during the post implementation stage. At IBM interactions at senior management level were predominantly formal and there was a shared understanding regarding the implementation of CRM Siebel. Their psychological contracts were largely 'mutual high-obligations' in type.

The 'mutual low-obligation' types of psychological contracts at BCC's senior management level did not allow a sharing of frames and thus people remained stuck in their own understandings and perceptions of the strategic implementation of CRM FrontLine system. Stakeholders at senior management level did not reach a stage of 'shared mental space' and 'knowing of what others know'. Their prolonged interactions only resulted in negative and destructive abrasion. The stakeholders at senior level were not able to resolve their differences and establish a shared understanding.

The above indicates that very little sharing of individual understandings took place. Success depends not only on how effectively diverse individuals are able to organise and develop their unique knowledge competencies, but also how they can integrate and utilise their distinctive knowledge both effectively and synergistically (Nonaka, 1994). This synergy can be obtained if barriers to knowledge sharing across key sub-cultures are understood. In our case at BCC, the senior management did not reach a shared understanding and therefore a synergy which could have facilitated an open sharing of

knowledge was not achieved. According to Boland and Tenkasi (1996), it requires a process of mutual “perspective taking” where distinctive individual knowledge is exchanged, evaluated and integrated with that of others in the organisation. The presence of ‘mutual low-obligation’ types of psychological contracts did not allow the development of a mutual perspective.

At IBM on the other hand, there was some shared understanding regarding the deployment of CRM Siebel and resulting psychological contracts were of ‘mutual high-obligations’ type at the senior level. They had formulated clear guidelines towards training and piloting. The system was first tested and deployed in Smyrna Georgia. Senior management hoped that lessons learned from their initial deployment would make the deployment at Portsmouth UK easier. However, that was not the case. The project suffered a drawback in the shape of data migration and training issues already covered in this chapter.

Attitudes of conflict avoidance and some conservative habits may have also prevented the sharing of knowledge regarding the state of legacy data. Scholars argue that if most leading members of an organisation are not comfortable with change and not willing to take risks, different views and perspectives could remain hidden, and therefore knowledge not culturally legitimated may be suppressed (Fahey and Prusak, 1998). This happened during the implementation process of CRM Siebel and inhibited the development of individual opinions or ideas. Fahey and Prusak (1998) refer to the failure to establish, challenge and align a shared context for the members of an organisation as ‘one of the eleven deadliest sins of Knowledge Management’. This shared context requires engagement in open, honest, supportive, and critical dialogue to develop different and new views. A process that permits the surfacing and examining of interpretations can allow the shaking of the background of consensus and open the possibility of mutual interpretation. This can enable the achievement of a new definition of the situation in which all participants can share (Habermas, 1979). An informal setting according to Van Maanen (1986) can help in voicing the differences and facing the conflicts in a constructive manner. Communication between the Development Team and end-users lacked a creative abrasion type of environment, through which innermost feelings and truth about the quality of the legacy data could

have been revealed. The teams also had a limited interaction between themselves. These limited interactions combined with a limited end-user involvement resulted in a false perception regarding the state and quality of legacy data.

The CRM Siebel deployment had a formal, rigid and mechanistic structure. Strong hierarchical enterprises prevent smooth cross-functional communication and consequently inhibit cross-functional cooperation or knowledge sharing. Breaking down hierarchies can enable knowledge sharing (Nonaka, 1994). Organisations such as IBM, that maintain hierarchical levels and silos will not encourage it. Knowledge in such organisations frequently becomes 'sticky' – that is residing in one area or silo and not easily moved to the other parts of the organisation (Bartlett and Ghoshal, 1998). Knowledge regarding the state and quality of data remained buried in the minds of end-users and raised its evil head in the shape of double entries and duplications. The end-users may not have been honest in their opinions regarding the quality of the legacy data while interacting with people from the Development Team (Wathne et al., 1996).

The competitive nature of the jobs at IBM.COM did not facilitate an open interaction type of environment. A round table where informal discussions, creative abrasions and exchange of ideas could take place was missing. Furthermore, as discussed earlier in this chapter, the controlling and monitoring role of management only led to the establishment of 'employee under-obligation' types of psychological contracts. Fear as an emotion is closely linked with the kind of psychological contract that exists between the two sub-cultures. Rousseau (1995) asserts that mutuality is key for a psychological contract to provide acceptable outcomes - she argues that it is only when both parties have something to gain that they will work to ensure a successful result. However at least part of such a psychological contract will be implicit (Makin et al., 1996), resulting in a lack of clarity for both parties (Anderson and Schalk, 1998). Although each party has a clear and conscious view about the key elements of the exchange they expect (such as reward for achieving goals or the sense of obligation to work late to meet a deadline), other elements will be subconscious and therefore much harder to define (Makin et al., 1996). In our case at IBM.COM end-users felt under pressure to use the system to

maintain their job security (Davenport et al., 1998). However, Sales Section acted boldly to resist the pressure and decided not to use the system.

There were occasions when people from different business units worked together on the basis of shared benefits. These types of interactions facilitated a free sharing of 'tricks of the trade' resulting in 'mutual high-obligations' types of psychological contracts. The end results were in the form of saved effort and good team work. A joint effort eliminated the duplication of effort in the above case. There were also other cases where less codified knowledge got shared freely. This happened through invisible colleges resulting in a 'guru culture' where information was shared as a favour towards each other.

Knowledge - particularly tacit knowledge in the form of 'tricks of the trade' - remained buried in the vertical and business-unit silos because of the mechanistic organisational architecture at IBM.COM. Interactions in general were more formalised within a mechanistic framework. Krogh, G. et al. (2000) argue that an organisation must actively pursue the work context as a 'learning organisation' where the individuals of that organisation are attuned to learning new things. A 'learning organisation' environment in IBM's mechanistic organisational culture could not be achieved at IBM.COM. Learning implies encountering and assimilating new facts. The end-users were not prepared to encounter CRM Siebel, and were stressed over the fact that data was in a poor state. As a result of inadequate subculture interactions at the end-user level double entries to the systems continued to occur making matters worse.

People, who are able to control relevant resources, and thereby increase others' dependence on them, are able to achieve the outcomes they desire (Salancik & Pfeffer, 1977). This happened in the 'guru culture'. Gurus or experts of the field shared knowledge through invisible colleges creating a yet another knowledge silo and a digital divide.

At BCC managers in departmental silos withheld their non codified knowledge through not allowing full access to the back-office system as a result of their mistrust in CRM FrontLine. Their mistrust was also related to lack of involvement in the implementation and decision making processes. As per 2004

they were very sceptical of the system and were constantly looking for better alternatives than CRM FrontLine. Departmental management, particularly Environmental Services and Council Tax, were pleased to have their secondees return to back-offices. According to our respondents Ian James (Neighbourhood Services), Doug Skinner (Council Tax) and Richard Budden (Environmental Services), the information regarding call handling sent to them by Vertex managed Contact Centre lacked quality. As a result of this the departmental managers had established an 'employee under-obligation' type of psychological contract with the Vertex management. This was also evident through their sympathetic comments towards the secondees in their return to the back-offices.

The research on social information processing (Salancik and Pfeffer, 1978), power (Pettigrew, 1973; Pfeffer 1980), specialisation (Burns and Stalker, 1961; Daft and Lengel, 1986; Lawrence and Lorsch, 1967), and organisational cultures (Gregory, 1983; Riley, 1983; Pettigrew, 1979, Schein, 1985; Strauss, 1978) further suggests that people tend to share assumptions, knowledge, and expectations with others with whom they have close working relationships. Similarly, social interaction and negotiation over time create opportunities for the development and exchange of similar points of view (Brown and Digid, 1998; Gray et al., 1985; Hansen, 1999; Isabella, 1990). There was some sharing of 'tricks of the trade' between secondees and non-secondees where they sat next to or close to each other. This confirms what our literature led us to believe. Moreover non-secondees felt slightly inferior to their colleagues because of their lower pay scale and lack of back-office knowledge. Management at Vertex did not anticipate this and were unable to facilitate the establishment of 'mutual high-obligations' types of psychological contracts between secondees and non-secondees. This resulted in a 'we and them' culture as reported by our respondents. The 'we and them culture' caused a divide and inhibited knowledge sharing in general.

In summarising the above, we conclude that psychological contracts play an important role in the sharing of less codified knowledge relating to work practices. Interactions even though prolonged may end up in negative abrasion or an illusion of consensus at the surface of words. In the case of BCC prolonged interactions created a divide and a destructive type of abrasion at the senior management

level. In the case of IBM.COM people withheld their innermost feelings to avoid conflict in maintaining their job security. Knowledge in the form of 'tricks of the trade' was shared through invisible colleges and other informal settings. However this informal sharing also gave rise to a 'guru' subculture. In that type of elite culture information was shared in the form of favours towards each other. IBM.COM did not exploit the 'guru culture' effectively.

We also conclude that prolonged interactions with shared benefits led to 'mutual high-obligations' types of psychological contracts facilitating a free sharing of 'tricks of the trade'. Further the lack of an effective end-user involvement led to 'employee under-obligation' types of psychological contracts and lack of ownership. This in turn led to staff retention issues at BCC and lack of trust and commitment to the CRM project at IBM.COM. Our analysis has led us to believe that prolonged interaction combined with 'mutual high-obligations' types of psychological contracts based on shared benefits can facilitate a free sharing of the 'tricks of the trade'. Furthermore, sharing under these circumstances is not bound to a certain group of people but can take a new shape as it did in the case of IBM.COM. There it took the shape of a 'guru culture' where gurus shared information with other gurus from other hierarchies and business units.

7.3 Part 2: Comparison using Willcocks and Harrow (1992)

In this section we discuss the deviation factors to compare and contrast the findings from our research sites. We intend to show that although there may be several differences, this research has also identified a number of similarities across the two contrasting sectors.

7.3.1 Differential customer base; as both the organisations have a differing clientele

In this section we discuss the impact of different clienteles on the performance of CRM from a knowledge sharing perspective. We critically analyse the differential customer base at both sites in light of our literature.

At BCC the customers were a general public not happy at the way BCC was handling their calls. The urgency to have something done regarding people's inability to get through to the council was predominantly a political agenda. This changed the project focus from a system integration approach towards a short term solution. Mintzberg (1987), and Orlikowski and Hofman (1997), suggest that people talk about strategies in one way, namely as a plan with fixed steps to achieve a known goal, while implementing them in another more ad hoc way, to accommodate unforeseen circumstances. In our case at BCC strategy did change, but not to accommodate unforeseen circumstances. It changed to accommodate a short term solution of getting the phones answered promptly. The 'call answering' focus was not strategically thought through and had implications on the successful closing of delivery loops by the call centre agents. Management at the back-offices was satisfied with the quality of the service provided by the call centre. There was also a stress factor relating to the need to answer calls as quickly as possible at the Vertex managed call centre. The problem arose when end-users, particularly the non-secondees, had to answer phone calls from the public in the shortest time possible without having enough knowledge regarding the back-office culture. Secondees, who possessed the non-codified knowledge regarding the BCC back-offices, decided to move back to their old jobs because of the 'employee under-obligation' type of psychological contract between them and the Vertex management (Shore and Barksdale, 1998). According to our reports from the departmental management, non-secondees, when not able to answer a query, redirected the public to the back-offices, thus taking away the main purpose of having CRM FrontLine system in the first place. Vertex did not have an in-depth knowledge of the back-offices and the BCC culture, which made matters worse. Vertex as an outsource services company lacked 'T-shaped skills' which could have helped them to understand the needs of secondees better. It would also have helped them to exploit the non-codified knowledge possessed by secondees in the shape of 'tricks of the trade' (Iansiti, 1993; Vincenti, 1984; Orlikowski and Tyre, 1994).

Pliskin et al. (1993) point out that the same information system may have a different meaning for different people, such as system analysts and users who may not have the same points of view concerning the system. At IBM.COM management hoped the system would facilitate the end-users in

their interactions with the external customers. End-users (as internal customers), however, perceived CRM Siebel as a controlling and monitoring device. This together with the double entries, created technology bottlenecks and slowed down the customer service instead of speeding it up. CRM Siebel evolved over time as the users found new ways and work-arounds in working with the system (Orlikowski and Tyre; 1994, Orlikowski and Iacono, 2001). End-users at IBM.COM discovered their short cuts and work-arounds using invisible colleges in getting their jobs done. At BCC end-users did the same. Instead of using the FrontLine system they answered the phone calls making notes and taking help from secondees wherever and whenever it was possible. A sharing of 'tricks of the trade' happened but only to some extent. The sharing of 'tricks of the trade' was free in the invisible colleges at IBM.COM and was related to 'mutual high-obligations' types of psychological contracts (Shore and Barksdale, 1998; Van- Maanen, 1986).

In both cases the end-users felt an obligation to use the system but chose not to use it whenever possible. Furthermore, in both cases the external customer involvement was largely ignored. Business Process Re-engineering work done by the development team at IBM had limited participation, acceptance and ownership, at the grass roots level. At BCC and IBM.COM, IT capabilities did not support business processes, and business processes were not in harmony with the capabilities IT could provide. Moreover, a limited end-user involvement had a negative impact on the user commitment.

We discovered that end-users at both sites worked under similar stressful conditions to answer customer queries. Moreover, the system, instead of creating a 'one-stop-service', actually inhibited the service it was designed to provide. Knowledge hoarding occurred at both sites (Bartlett and Ghoshal, 1998). At BCC, secondees withheld their share of non-codified knowledge and took it back with them to the BCC back-offices. At IBM.COM it remained buried in the business unit silos due to the competitive nature of their work. The 'guru culture' added to yet another knowledge silo where knowledge got shared only between the gurus. The differing clienteles may have had differing implications for the management at both sites. However, in the case of both cohorts of end-users using the CRM system for customer interactions, it created a stressful environment. Statistics recorded in order to monitor end-user's call

time acted as a stress factor. As a result the service quality suffered at both sites. Errors such as duplications and double entries due to a lack of cross-cultural interaction did not speed up nor facilitate a successful customer service. At both sites, the lack of sharing of 'tricks of the trade' was also related to job security and power (Davenport et al., 1998; Pfeffer and Sutton, 1999). People, who are able to control relevant resources, and thereby increase others' dependence on them, are able to achieve the outcomes they desire (Salancik & Pfeffer, 1977). *Secondees* and *gurus* held desirable non-codified/tacit knowledge. In the case of *secondees* it enabled them to move back to BCC and in the case of IBM.COM, *gurus* found a way out of the double entries and duplications without having to use a time consuming vertical reporting structure.

We conclude that although the customer base in the two cases was different yet the issues faced by the end-users were remarkably similar in nature. At both sites the end-users perceived that the system complicated and slowed down their progress in securing an efficient customer service. Furthermore, end-users at both sites felt under compulsion to use the system but decided not to use it when the opportunity arose. No external customer involvement was considered by the senior management at either site. We also found that tacit/non-codified knowledge hoarding issues were related to job security and power. At BCC *secondees* used this power as insurance to move back to their old jobs, whereas at IBM it resulted in a 'guru culture' giving rise to a clique type power structure where *gurus* only shared their 'tricks of the trade' with *gurus*.

7.3.2 Differing goals; social goals vs. profit goals

In this section we compare BCC goals with those of IBM using the theories from the reviewed literature. We discuss the similarities and differences surrounding the CRM project rationale. We also analyse the findings from both cases in order to obtain an improved understanding of the achievement of CRM project objectives at both sites.

According to our findings both cases had a history of 'part technology' strategy. IT systems were bought and implemented without any consideration to overall system integration. IBM wanted to integrate the segregated business across all their geographies. BCC's CRM initiative was triggered by a political agenda with a 'call answering' focus; however, 'vanilla' applications seemed to be popular in BCC as well because they required less in-house expertise, a general trend also found at IBM (Parr and Shanks, 2000; Willcocks and Sykes, 2000).

Claver et al. (2001) also underline the cultural consistency which the implementation of an IS requires. They conclude by claiming that IT systems are implemented following technical analysis and considerations, with little if any regard for business needs. However, if the corporate culture of a company is dominated by the business experts with limited knowledge of IT the reverse can happen. In the case of BCC business experts implemented a new system without understanding the implications of the implementation process. Our research findings indicate that whilst calls at BCC were getting through the quality of service was suffering. While CRM FrontLine met the 'call answering' focus objective to some extent it also raised further issues. These issues included the poor quality of information provided by call centre agents (non-secondees) at the Vertex managed Contact Centre. The four stages of Nonaka and Takuchi (1995) did not have enough time to take place. The leaving of secondees not only created a non-codified knowledge vacuum but also had a negative affect on the service quality at the Contact Centre.

Tony Glew's system integration approach which was favoured at the departmental level as well may have been an appropriate implementation strategy after all. El Sawy (1985) argues that if IT specialists are members of a corporation or are directly related to it, they are part of an organisational culture and none of them should be excluded from an analysis of organisational behaviour in the face of IT. Senior management at BCC changed its course and ignored the implications of a 'call answering' approach to knowledge sharing at departmental level. The CRM Project suffered from a lack of in-house IT expertise support as people such as Tony Glew and David Hall resigned from their posts. Their expertise was not taken on board and their integrative approach was completely ignored.

'Public getting through' at BCC also increased demands on the resources available at the back-offices (departments). According to our findings the CRM project created extra workload for the departments. The fact that people could call in and get through also meant that BCC had to provide back-office services to the public. These back-office services had not been pushed to their limits when the public was not able to get through to BCC previously. Our research indicates that although BCC may have met their goal concerning getting the phones answered by their CRM initiative, yet they have exposed their limitations at departmental level. The CRM project pushed departmental resources to their limits, which also acted as an inhibitor to management commitment at the departmental level. Furthermore, a continual limited involvement in the development of CRM FrontLine made departments fall back to their old thinking of 'part technology' strategy. The movement of Secondees back to BCC left the 'call answering' goal vulnerable to even more quality issues.

According to Herschbach (1995) tacit/non-codified knowledge is embedded in technological activity to a greater extent than is normally recognised (In addition, tacit/non-codified knowledge has not disappeared with the use of more sophisticated ways of manufacturing based on the application of science and descriptive knowledge. "On the contrary, new forms of know-how have appeared and all these non-codified techniques play an important role both in industrial production and in technical and technological innovation" (Perrin, 1990). Polanyi (1966) has demonstrated that all human action involves some form of tacit/non-codified knowledge (Nonaka et al., 1995). In our case at BCC the non-codified knowledge in the form of 'tricks of the trade' returned, buried in the minds of secondees, to the back-offices. Non-secondees with their limited understanding of BCC culture, back-office non-codified knowledge and lacking any support from departmental level at BCC, were not able to secure an efficient customer service at the Vertex managed Contact Centre.

IBM wanted customers to get a unified view of the organisation. The management also wanted CRM Siebel to facilitate end-user interactions in order to provide an efficient service to customers. Our findings indicate that discrepancies during the BPR prior to CRM Siebel deployment have had negative consequences in form of data misfit issues. Davis (1989) argues that perceived usefulness is a strong

correlate of user acceptance. User acceptance at IBM.COM has been limited. Our research findings prove double entries and duplications have caused stress and slowed down the end-users ability to serve their customers efficiently.

Innovation diffusion theory recognises that while the technical attributes of innovation per se may not be significant, perceptions of technology do matter, and are important factors influencing technology adoption. Pre-existing structures and cultures (internal context) shape differing stakeholder perceptions regarding new systems and their implementation and performance ('Process' and 'Outcome', Pettigrew, 1997). Our analyses confirm that many end-users were not against the system per se. It was their perceptions regarding its usefulness and its objective, which was different. CRM Siebel was interpreted as a controlling and monitoring device by the end-users.

Scholars analyse information systems and organisational culture as two closely related issues in any firm. Organisations with a mechanistic culture tend to standardise the system implementation compared to organisations with an organic culture, where the implementation process for an IT system is more culture led (Burns and Stalker, 1961). The mechanistic organisational architecture at IBM.COM acted as an inhibitor to the knowledge sharing processes. Knowledge, particularly the tacit/non-codified knowledge, became sticky and resided in vertical and horizontal silos. According to our findings lack of cross-cultural communication across business units at IBM.COM did not facilitate a 'unified IBM' view.

In conclusion both sites missed their targets to some extent. BCC secured the 'call answering' target and helped the public to get through. However, this exposed discrepancies at the departmental level pushing their resources to their limits which resulted in a decline in commitment towards CRM FrontLine. At IBM.COM a segregated and mechanistic organisational architecture continued to haunt the CRM project resulting in knowledge silos along the vertical and horizontal axis. A 'unified view' was hard to achieve as the end-users struggled with data misfit issues and duplications.

7.3.3 Complex and debated performance indicators vs. mainly quantitative financial measures

In this section we discuss various performance indicators at BCC and compare them with those at IBM.COM. We discuss how CRM system performance has been measured at both sites linking it with relevant theories from our reviewed literature.

At both sites there were very few qualitative performance measures in place. At BCC call rate was monitored using the 'Call Stats' (statistics), whereas at IBM.COM in addition to call monitoring, a different system (a forecasting system named SCOTT) was also used to control and monitor the use of CRM Siebel. End users at both sites felt that they were being monitored and controlled. 'Mutual high-obligations' types of psychological contracts were missing as a result of a controlling and monitoring culture (Shore and Barksdale, 1998). This affected their user commitment negatively. Our findings indicate that people tied up with their headsets to their work places felt under pressure and were complaining about the stressful environment.

The CRM project at BCC, according to our research findings, was all about quantity. The 'call answering' focus strategy ignored the qualitative issues related to knowledge sharing between the front and back-offices. Creating a call centre to get the calls answered had qualitative consequences. These were not taken into consideration and inhibited successful implementation and post implementation processes. Moreover, the departmental managers were not happy with the quantitative measures. They wanted qualitative performance indicators and were not provided with such from the Vertex management. This resulted in dissatisfaction on the managers' part. They actively started to look for parallel alternatives to CRM FrontLine.

At IBM.COM CRM Siebel was not auditable. This was due to the fact that the system was still in its teething stages and was not perceived as reliable according to our reports. As the system was not auditable, there were groups such as Field Sales which did not feel obliged to use CRM Siebel. The

people who were using the system were the ones without an option. Furthermore, the reports taken from the systems lacked qualitative information for the management at IBM.COM. IBM.COM had hopes for improvement regarding the system analytics as per 2004.

Our findings show that the methods used to measure the performance of CRM systems at both sides were predominantly quantitative. Qualitative measures to assess the knowledge created and shared were not in place. According to Nonaka (1994), strong hierarchical enterprises prevent smooth cross-functional communication and consequently inhibit cross-functional cooperation or knowledge sharing. Breaking down hierarchies can enable knowledge sharing. Organisations that maintain hierarchical levels and silos will not encourage it. Knowledge in such organisations frequently becomes 'sticky' that is, residing in one area or silo and not easily moved to the other parts of the organisation (Bartlett and Ghoshal, 1998). Perrin (1990) argues that the non-codified techniques play an important role in industrial production and in technical and technological innovation. There were no knowledge management systems in place at either site that could capture, retain and exploit knowledge, particularly less codified knowledge in the form of 'tricks of the trade'. Boland and Tenkasi (1996) argue that, in order to develop new products, the separate domains must interact and learn from each other in ways that will yield new insights into a problem, and new ideas for the successful production of improved products. At our research sites, there were no CRM team rooms or round tables where current CRM issues could be discussed and dealt with. Knowledge continued to reside in departmental and hierarchical sub-cultural silos. Scholars like Mumford et al. (1978) vote for user participation. However in our cases user participation was very limited and in some cases completely ignored. According to our findings end-user involvement in the decision making process was completely ignored at both sites and otherwise when participation occurred, it was on management's terms and conditions and highly regulated. Our respondents at both sites openly admitted a lack of intrinsic satisfaction in relation to the CRM project.

In conclusion, according to the above, both sites used predominantly quantitative measures to control and monitor the system usage. The quantitative measures did not include any financially related audits

at IBM.COM. At BCC the quantitative measures led to a dissatisfied departmental management. The managers at the departments started to look for alternative systems. End-users at both sites felt controlled and monitored by the management. This had a negative affect on their commitment and resulted in ‘employee low-obligation’ types of psychological contracts. Knowledge became sticky and remained in departmental and hierarchical sub-cultural silos. No knowledge management systems were in place at either of the sites. A round table or a neutral platform for discussing and resolving CRM issues was missing at both sites. ~

7.3.4 More ill-defined policy directives; complexity of policy implementation vs. relatively less ambiguous policy

Under this section we discuss the policy directives in relation to the CRM implementations at both sites. We do this in the light of our reviewed literature and discuss the deviations and similarities of policy implementations at our research sites. We conclude the section with a short summary.

At BCC, around 1994, the senior management made a decision to move from a centralised IT structure to increased autonomy over buying in and outsourcing IT services by departments. As a result, the role of central IT became that of a support function. According to Willcocks and Margetts (1994) the newness and attractiveness (convenience/pricing) of technology led many public sector organisations to expose themselves to consultancy and supplier markets. Various applications developed without consideration of a strategy for integration. IT solutions were bought in by different departments with little regard for cross departmental integration resulting in technology bottlenecks (Holland and Ben, 1999). Knowledge silos resulted from an ill-defined ‘part technology’ policy through which Central IT ended up facilitating the development of departmental knowledge bottlenecks. According to our research findings the pattern of outsourcing the programming to IT NET and the buying of hundreds of solutions continued for many years.

During the year 2000 came the Government directive, dictating a new policy according to which Birmingham City Council (BCC) were given the task of ensuring that all its services were available to

citizens through electronic means by 2005. This government directive was intended to modernise the way public sector delivers policies, programmes and services to its customers/citizens. The above illustrates the government deadlines and speed of new legislation that Willcocks and Margetts (1994) talk about as pressure factors exposing organisations to consultant and supplier markets.

The purpose of IEG (Interactive Electronic Government) was to build local government services around customer/citizens' needs rather than the organisational structures of service providers, giving its customers a 'one-stop-service'. All levels of government were being encouraged to make full use of the potential for electronic service delivery to improve the responsiveness and quality of services.

The CRM Project at BCC was an effort by the senior management to implement the IEG government policies. According to the new directive the role of central IT was to facilitate integration in order to achieve the objective of 'one-stop-service'. However, implementation of such an objective needed a high level of in-house IT expertise. According to our findings BCC had very limited in-house IT expertise. Outsourcing was yet again a popular option available to the senior management. However, the CRM initiative missed the 'one-stop-service' objective as they moved away from their initial integrative approach towards a 'call answering' strategy. At the political leadership and senior management level the CRM initiative had succeeded in increasing public access to BCC. Nevertheless at departmental level it did not remove the knowledge bottlenecks and ended up re-enforcing the departmental silo mentality (Holland and Ben, 1999).

IBM was similar to BCC in their 'part technology' strategy. Different business units at IBM.COM operated as separate businesses without any consideration of system integration. CEO, Lou Gerstner, wanted to integrate the islands of businesses within IBM. CRM Siebel was supposed to unify IBM and facilitate customer interactions with IBM. However, their CRM initiative could not facilitate a sub-cultural integration. According to our findings knowledge bottlenecks created by a segregated mechanistic organisational architecture continued to develop even during the post-implementation stage at IBM.COM. Louis (1985) argues that the sub-cultures are the set of understandings or meanings

shared by a group of people. The meanings are largely tacit among members, are clearly relevant to a particular group, and are distinctive to the group. Mechanistic hierarchical sub-cultural silos at IBM.COM developed further, giving birth to a 'guru' type subculture. The anticipated unifying of IBM did not occur as CRM Siebel could not facilitate cross-cultural communication in a competitive and rigid environment (Boland and Tenkasi, 1996).

CRM Siebel was implemented mechanistically without any deep understanding of sub-cultural and knowledge management issues. This resulted in data misfit issues which had an adverse affect on data integration. Double entries and duplications ended up creating more 'prescriptive knowledge' silos. The data misfit issues combined with the strict and rigid work environment resulted in 'employee low-obligation' types of psychological contracts (Shore and Barksdale, 1998). End-users perceived CRM Siebel as a forecasting tool used to monitor and control their actions and IBM again fell short of achieving its unifying objective.

In conclusion, our findings indicate that both sites suffered from 'part technology' syndrome. Both considered CRM to be a means of integrating the separated departmental and business unit silos. At BCC the CRM project changed its direction and become focussed on short term results re-enforcing the departmental bottlenecks and failing to integrate the sub-cultural silos. At IBM it could not integrate and unify distinctively mechanistically isolated business unit structures. In both cases there was a lack of cross-cultural communication based on 'mutual high-obligations' types of psychological contracts. As a result, knowledge sharing, particularly the sharing of 'tricks of the trade' was very limited. We conclude that both sites faced severe difficulties in the implementation of their policies. At BCC the role of Central IT changed from a 'part technology' support function with the aim of facilitating system integration. However, this role did not get a chance to develop fully as the project changed its direction and became focussed on short term results. The inherent ambiguity of the above situation had an adverse effect on the departments. At IBM the policies also led to ambiguity in that CRM was supposed to unify and facilitate, and yet the end-users perceived it to be predominantly a controlling and monitoring device.

7.3.5 Relative openness of government and decision making; stress on representatives vs. relative secrecy; stress on business confidentiality

In this section we discuss openness regarding government and decision making at the two sites. We discuss and compare also the stress on representatives vs. stress on business confidentiality at our research sites in the light of the reviewed literature. We discuss how the above has inhibited or facilitated the building of ‘mutual high-obligations’ types of psychological contracts and non-codified knowledge sharing.

At BCC and IBM the decisions were made by the senior management without involving any internal or external end-users of CRM systems. Both sites had a narrow stakeholder base initially. More departments and business units were added on with time, and usage of the CRM system was given a high priority at both sites. However at the Vertex managed contact centre end-users whenever possible, made manual notes in helping the customers. They then later on logged their calls onto the system thus fulfilling a system need. At IBM.COM even though the system was highly regulated, nevertheless end-users declined to use it whenever possible.

At IBM.COM the competitive nature of the business resulted in duplication of efforts and double entries. However, when occasionally the possibility of working across the sub-cultural boundaries manifested itself, the resulting cross-cultural team work ended up saving effort and increasing efficiency. The rigidity of IBM’s mechanistic organisational culture did not allow many prolonged interactions across the business units (Burns and Stalker, 1961). This gave rise to information and knowledge bottlenecks. Non-codified Knowledge sharing when possible occurred within the business unit silos without being shared across the business units. The resulting psychological contracts established in such a competitive work environment were of ‘mutual low-obligation’ type, where both partners were not willing to share any ‘tricks of the trade’. This impeded the development of an environment enabling ‘mutual perspective’ and ‘shared context for knowing’ (Boland and Tenkasi, 1996; Newell et al., 2002; Shore and Barksdale, 1998).

At BCC the governance of the project was very much dominated by the ‘call answering’ focus and did not allow an integrative approach. This divide, resulted in reinforcement of departmental silos (Bartlett and Ghoshal, 1998). The departments ended up planning their own independent alternatives, in parallel to the CRM project. The closed nature of the project governance persists, with its continuing narrow stakeholder base. Closed governance similarly presented itself at IBM.COM, the lack of end-user involvement resulting in weak psychological contracts between the end-users and the management (Janssens et al., 2003). Consequently issues regarding the poor quality of the legacy data were not exposed until a later stage of the implementation process.

Meyer and Rowan (1977) argue that sub-cultures at the periphery of an organisation may not share information fully with sub-cultures at its technical core. A small team from BCC’s technical core (Central IT) worked with the Vertex management without any involvement from the departments. This alienated the stakeholders, particularly secondees and departmental management, inhibiting the development of ‘mutual high-obligations’ types of psychological contracts. This consequently had an adverse effect on tacit knowledge sharing, inhibiting the sharing of ‘tricks of the trade’ (Shore and Barksdale, 1998; Vincenti, 1984; Orlikowski and Tyre, 1994). The above highlights the significance of micro-elements in the closed governance at BCC.

According to Janssens et al. (2003), when investigating the employer obligation of long-term involvement and the employee obligations of personal investment, it was found that flexibility and loyalty are related to high affective (sic) commitment. Affective commitment was mainly found in clusters of strong, investing and loyal psychological contracts. Secondees at BCC withheld their non-codified knowledge regarding the BCC culture resulting in a knowledge vacuum after their departure from Vertex managed contact centre – an outcome of closed governance.

Conclusively both CRM projects had relatively closed governance throughout the project life cycle. At neither site was end-user involvement considered in the decision making process. At IBM.COM the competitive nature of the work led to ‘mutual low-obligation’ types of psychological contracts between

the business units. At BCC the alienation, of secondees and departmental management in the project governance resulted in reinforcement of a knowledge silo type of culture. Moreover at BCC closed governance produced weak and non-reciprocal types of psychological contracts (Janssens et al., 2003). Knowledge sharing particularly the sharing of non-codified/tacit knowledge was limited at both sites.

7.3.6 Wide stakeholder base vs. primary focus on shareholders

Under this section we discuss and compare the type of stakeholder base CRM Projects had at our research sites. We analyse the impact it had on subculture interaction, psychological contracts and the sharing of non-codified/tacit knowledge in the form of ‘tricks of the trade’.

IBM claimed to have a ‘broad but not deep’ approach towards the implementation process of CRM Siebel. However, the end-user involvement at our research site, namely the North Harbour Portsmouth, was very limited. Decisions were made at the top level and the system was deployed with a top down approach. The implementation process was steered from the top and had a rather rigid and mechanistic structure. Interestingly we found that BCC used a similar top down approach for the implementation of their CRM FrontLine. Here also departmental and end-user involvement was limited. Sponsorship of CRM according to Goodhue et al. (2002) is initiated by senior management. Project sponsorship was initially strong at both sites; however, it died out as both CEOs left their respective projects before completion, narrowing further the stakeholder base.

According to our findings from the analyses we conclude that both sites used a top down mechanistic approach towards implementation without understanding thoroughly the pre-existing environment. At IBM.COM this resulted in data misfit issues, and lack of trust in the system. At BCC the results were similar as secondees and departmental managers showed very little trust in the system. In both of these above cases it led to interactions displaying weak, imposed and ‘employee low-obligation’ types of psychological contracts (Anderson and Schalk, 1998; Janssens et al., 2003; Makin et al., 1996; Rousseau, 1995; Shore and Barksdale, 1998; Thibaut & Kelley, 1959). Consequently knowledge

sharing in all forms suffered. Less-codified knowledge in the form of 'tricks of the trade' did get shared in closed groups or sub-cultures where, however, it remained trapped reinforcing the silos.

According to Nonaka, (1994) knowledge intensive firms, competitive advantage and product success are a result of collaborative, ongoing learning. Success depends not only on how effectively diverse individuals are able to organise and develop their unique knowledge competencies, but also on how they can integrate and utilise their distinctive knowledge both effectively and synergistically (Nonaka, 1994). Such synergy could have been achieved if the aids/barriers to knowledge sharing – in particular non-codified knowledge sharing – across the sub-cultures were understood. According to Boland and Tenkasi (1996) this synergy requires a process of 'mutual perspective taking' where distinctive individual knowledge is exchanged, evaluated and integrated with that of others in the organisation. In essence, developing a comprehensive knowledge base amongst a community of highly differentiated yet reciprocally dependent individual specialists requires an ongoing process of 'mutual perspective taking' where individual knowledge and theories of meaning are surfaced, reflected on, exchanged, evaluated and integrated with others in the organization. Much of social behaviour is predicated on assumptions an actor makes about the knowledge, beliefs and motives of others. This is the beginning of the process of 'mutual perspective taking', and is fundamental to communication. Pervasive weak psychological contracts in our cases did not allow creative abrasion to take place where innermost feelings could be revealed and a mutual perspective could have been reached. On the contrary, lack of trust in a mechanistically driven project structure resulted in non-reciprocal relationships and knowledge bottlenecks.

In conclusion, sponsorship at senior level lacked some continuity as both CEOs left their projects prematurely. Weak and low-obligation types of psychological contracts between the stakeholders failed to develop reciprocal relationships. A mutual perspective and shared understanding regarding the usefulness of CRM system was missing at both sites. Knowledge sharing, particularly the non-codified/tacit knowledge in the form of 'tricks of the trade', did not get shared across the sub-cultural

boundaries. Both projects had a narrow stakeholder base and the system deployment was carried out without a thorough understanding of the pre-existing environment.

7.3.7 Extensive accountability vs. restricted accountability

Under this heading we discuss the accountabilities in the CRM project from three hierarchical perspectives. We use our analytic findings to discuss accountability from senior management, middle management and end-user's perspectives. We discuss this in the light of our reviewed literature and provide our conclusion at the end.

Senior management accountability at BCC was to the elected politicians and eventually the public. They, however, did not take a long term strategic route and chose a short term solution to the 'call answering' problem. The project was implemented without any deep understanding of the back-office integration issues. Also BCC were not aware that by having calls answered they would expose their resource limitations in the back-offices. This overstretched the limited resources in the back-offices, which in turn did not please the managers who had to cope with an increase in demand without an increase in their resources. Hence the management at the departmental level were not satisfied with the FrontLine solution.

Departmental autonomy at BCC had been promoted prior to the CRM initiative, Central IT at that time having a supporting role. This changed with the CRM FrontLine. Departments were now expected to align themselves with a corporate system. Thus the CRM project increased departmental accountability and expected departments to adjust themselves to the needs of the project. They responded by finding their own work-arounds and exploring the idea of having a separate solution. Increased accountability negatively affected departmental interactions with the Central IT. The fact that departmental involvement was limited in the decision making process regarding the CRM project made matters worse. Departments felt alienated and pressurised to use a system which they did not have a strong faith in and consequently chose to withhold their non-codified knowledge.

IBM senior management wanted to integrate the segregated parts of IBM and present a unified view of IBM to their customers. Senior management was responding to the current market needs to improve their service by providing a 'one-stop-service' to their customers and thus improve their ROI and consequently please the shareholders. Segregated parts of IBM acted as separate businesses without any prolonged interactions across the business units. Middle management at IBM.COM found themselves in an odd position. They were supposed to promote integration methodology in a mechanistic organisational structure (Burns and Stalker, 1961). Their perception regarding the system as a facilitating tool was not taken on board by the end-users.

Accountability at the end-user level was limited. End-users at both sites chose not to use the system whenever opportunity presented. However, at both sites end-users felt obliged to use the system – not because of its usefulness, but because of the top down regulations. Our findings show that the system caused some stress and slowed down end-user interactions with customers. This resulted in end-users withholding their non-codified knowledge and sharing it only among people with whom they had reached 'mutual high-obligations' psychological contracts (Shore and Barksdale, 1998).

In summary, both sites had limited accountability because of the 'part technology' strategy which allowed and promoted IS autonomy without any consideration of system integration. Ciborra bluntly states, "CRM seems to have no built in mechanisms by which it acquires its own momentum and the diffusion becomes a self-feeding process" (Ciborra, 2000). CRM initiatives according to our findings were intended to improve integration. However, with a top down approach the implementations only resulted in alienation and sub-cultural silos at both sites.

7.3.8 Primary resource base from public taxes vs. primary resource base from operational returns and borrowing

In this section we discuss the impact of resources on the departments and business units as a result of both CRM initiatives. We analyse using our research findings and reviewed literature to enhance our

understanding regarding the stress caused by CRM initiatives at BCC and IBM. We conclude with a short summary.

At BCC CRM FrontLine was supposed to facilitate a 'one-stop-service' by getting the public through and effectively helping them with their queries. However, it ended by slowing down the service due to the lack of a thorough back-office system integration, and understanding of BCC cultural knowledge. Moreover, it exposed the limitations in back-office resources, as when the free furniture removing service, which was accessible via the Vertex managed front-office, resulted in strains being put on hard pressed personnel at the back-office. Those managing the resources in the back-office were not pleased, as joining the CRM FrontLine project had increased the demand without taking into consideration its impact on back-office resources. Consequently Central IT as per 2004 was desperately trying to improve integration whilst back-offices were investigating alternate options in parallel to FrontLine in order to meet their customers' demands.

At IBM.COM CRM Siebel was not auditable. Team leaders of various end-users were not sure about the usefulness of the system themselves. Managers who took out the reports claimed that it only gave them a snapshot and not a comprehensive report over a period. They were hoping for the analytics to improve. The double entries were an ongoing problem. This combined with a rigid hierarchical organisational structure, where interactions across the business units were minimal, also caused a duplication of efforts and some waste of resources (Nonaka, 1994).

The full time working teams that were supposed to see through a smooth implementation were unable to discover the poor state of legacy data prior to the implementation. This data misfit issue had a negative affect on the CRM project. A closer interaction involving the end-users at an early stage could have enabled an effective use of the available resources. It would have also helped in creating a shared understanding based on 'mutual high-obligations' types of psychological contracts (Shore and Barksdale, 1998). This in turn could have facilitated end-user ownership.

In both cases we conclude that the CRM systems were implemented without a thorough understanding of their impact on the available resources. An in-depth business analysis could have saved time and effort. In the case of BCC the resources from public taxes came under pressure as demands in terms of personnel in the back-offices increased. At IBM.COM data misfit issues made things worse resulting in double entries and duplication of efforts. The resources were thus stretched at both our research sites as a result of a poor implementation planning.

7.3.9 Multiple values and goals; service, public interest, equity, professionalism, consumer participation, complex trade-offs vs. relatively restricted

Under this heading we discuss the values and goals at BCC comparing them with those at IBM.COM. We critically analyse the multiple goals at BCC in terms of how the CRM project has taken into consideration the public interests and consumer participation in order to achieve their ‘one-stop-service’ target in a professional manner. We then compare this with IBM.COM analysing the deviating factors if any. We provide a summary at the end.

At BCC the public according to our finding was interested in getting access to BCC. CRM FrontLine was an initiative that was supposed to provide increased public access and ultimately achieve the government directive of a ‘one-stop-service’. There was some trade off in terms of the increased access to BCC by the public who now needed to dial just one number in accessing BCC. The public was getting through to BCC via the Vertex managed Contact Centre; however, the quality of service suffered due to a lack of system and cultural integration. Professionalism was missing, as the CRM project was rolled out without any comprehensive analysis of the existing environment. As at 2004 BCC Central IT were working to achieve improved system integration. Back-office managers – as a result of weak and ‘employee low-obligation’ types of psychological contracts – were not happy with the system and felt excluded from the CRM FrontLine development process (Anderson and Schalk, 1998; Janssens et al., 2003; Makin et al., 1996; Rousseau, 1990, 1995; Thibaut & Kelley, 1959). They were actively looking for a better system that would meet their departmental needs more specifically. Consumer (in our case the public) involvement in the CRM project was minimal. Davis (1989) argues

that perceived usefulness is a strong correlate of user acceptance. Dissatisfied end-users (secondees) were moving back to their back-offices as per 2004.

Equity in the essence of fairness for secondees in terms of their employee contract from BCC was there. Their contract terms with BCC put them on a higher scale compared with their non-secondee colleagues. The fact that they were given the same working status as their non-secondee colleagues under Vertex management caused friction in form of 'we and them' culture. The outsourcing of the Call Centre management to Vertex lacked professionalism in terms of understanding the consequences of having secondees and non-secondees under different employment contracts. The outsourcing contract seemed to have been rushed through without any creative abrasion which could have resulted in the achieving of so called 'T-shaped skills' and a 'knowing of what others know' type of environment. Davidson (2002) argues how frames (frames are cognitive structures or mental models that are held by individuals) and shifts in frame salience influence sense-making during requirement determination. In the above case sharing of frames between BCC central IT and Vertex did not take place fully.

At IBM.COM, the ultimate goal of unifying IBM was not fully achieved. Customer service suffered as the end-users struggled with the new system and the poor quality of transferred legacy data on it. The competitive nature of their work and a lack of prolonged interactions across the business units could not present a unified IBM to their customers. Professionalism in terms of a lack of a thorough investigation of the existing environment prior to CRM Siebel deployment was missing. Moreover, the project was launched to promote integration in unifying the segregated parts of IBM. A rigid mechanistic organisational structure did not allow free sharing of knowledge (particularly the non-codified/tacit knowledge in the forms of 'tricks of the trade') across the business units and different levels of hierarchies (Vincenti, 1984; Polanyi, 1973; Orlikowski W.J. and Iacono S., 2001). End-user involvement was limited and consumer (customer) involvement was not considered.

In summary, we find that BCC has been successful to some extent in providing telephonic access to the public. However, they have not achieved their ultimate target of 'one-stop-service'. At IBM.COM a unified service could not be achieved due to the competitive nature of the work. Moreover their service suffered from poor data quality and the duplication of efforts. At both sites there was some lack of professionalism as neither investigated the existing environment fully prior to the implementation. At both also free non-codified knowledge sharing was limited. Both sites had dissatisfied end-users as per 2004. Furthermore, a lack of external customer involvement hindered the establishment of a broad stakeholder bases at both sites.

7.3.10 Statutory and parliamentary regulation; codes of conduct vs. board of directors; company planning frame works

Under this heading we discuss the impact of statutory regulations on the CRM project at BCC and compare that with the rigid framework at IBM.COM in the implementation of their CRM initiative. We critically analyse our findings in the light of the reviewed literature and present a summary in the end.

According to the Office of the Deputy Prime Minister (2000), Birmingham City Council (BCC) was given the task of ensuring that all its services were available to the citizens through electronic means by 2005. The fact that the public was complaining and wanted a 'one-stop-service' from BCC put pressure on BCC senior management to prioritise and take the quickest route. Hence the 'call answering' focus strategy was prioritised over the 'system integration' one. This illustrates how government deadlines and speed of new legislation, which Willcocks and Margetts (1994) talk about as pressure factors, push organisations towards consultant and supplier markets.

The code of conduct was very much dictated by the 'call answering' focus strategy, which caused divisions, not only at senior management level, but also at middle management and grass root levels. The perceptual divide where partners were not willing to share their 'frames' prevented the integration of departmental knowledge silos and hindered the development of a 'shared context for knowing' (Davidson, 2002; Newell et al., 2002; Orlikowski and Gash, 1994).

At IBM a rigid and mechanistic organisational structure could not facilitate the unifying of IBM through their CRM Siebel initiative. At our research site Portsmouth-UK people had very strict deadlines, and training seemed to be rushed through to get the system running. The vertical reporting structure could not facilitate a free sharing of non-codified/tacit knowledge in the form of ‘tricks of the trade’ across the sub-cultures at IBM.COM. Knowledge, particularly the tacit/non-codified knowledge remained buried in different business-unit silos (Bartlett and Ghoshal, 1998). New sub-cultures (guru culture) took shape and furthered the knowledge silo mentality.

In both cases whether the directives were from the Government or from the Board of Directors, they ended by delivering a solution without carrying out preliminary comprehensive business and cultural investigations. The implementation seemed to have been rushed through without covering such issues such as back-office data integration at BCC and data misfit issues at IBM.COM. Moreover, as a result of a top down implementation approach both organisations suffered in terms of stakeholder commitments at middle management and end-user levels. Lack of commitment was also found at the senior management level at BCC. This was due to differing perceptions and competing interests (Long and Fahey, 2000).

7.3.11 Needs of national economic management vs. market place signals

In this section we discuss how the CRM project implementations at our research sites were affected by the needs of economic management and market place signals. We critically analyse the similarities and deviating factors, linking them with our findings and reviewed literature. The section concludes with a short summary.

The purpose of IEG (Interactive Electronic Government) was to build local government services around the needs of customer/citizens rather than the organisational structures of service providers, giving its customers a ‘one-stop-service’. BCC were encouraged to make full use of the potential for electronic service delivery to improve the responsiveness and quality of their services. This was intended to result in different departments of BCC working together seamlessly to deliver services more effectively and

efficiently. The idea of 'one-stop-service' was also, supposedly, going to save time and resources to have information integrated and available when required. At BCC the CRM FrontLine project was heavily reliant on limited time and financial resources. Sarah Wood (Strategic Director of Resources) with her financial background steered the project towards a cheap and effective solution to satisfy public complaints. However, a mutual perspective and shared understanding where the sharing of frames could have taken place to establish a 'mutual high-obligations' psychological contract between Sarah Wood and Tony Glew (Director of Central IT) did not take place (Bartlet and Goshal, 1998). Thus CRM FrontLine was deployed without a thorough understanding of system integration and its effects on the implementation process.

Within IBM, the part technology was proving to be expensive and systems were bought and implemented without any consideration of overall system integration. CRM Siebel was supposed to integrate the segregated parts of IBM. At our research site, IBM.COM, the project had a tight budget and strict deadlines to adhere to. The data quality issues, such as duplication and double entry, were perceived to be user errors by the management. According to our reports there were limited funds available as per 2005 to ensure data quality at IBM.COM. CRM Siebel was supposed to save time and increase efficiency in facilitating a quick customer service by its end-users. According to our findings the project was still going through its teething stage and had still to win end-users' trust. However this was also the case at BCC, confirming Willcocks (1991).

In conclusion both projects were launched without thoroughly covering the issues such as data migration and information integration. There were no extra financial resources available at either site and projects were not able to secure a large stakeholder base. The departments at BCC and business units at IBM.COM were hesitant in volunteering their resources to obtain an overall system integration due to the lack of 'mutual high-obligations' types of psychological contracts. Very little 'float' was given in both projects due to time constraints.

7.4 Conclusion of Cross-Case analysis

This chapter set out to compare, discuss and analyse the research findings from both cases in the light of the reviewed literature. The framework previously used in ‘within-case’ analyses was used to discuss deviating patterns and similarities from both research sites. The deviating patterns of the adaptation phase of CRM implementation and their similarities were investigated, and compared to gain further insight into the linkages between sub-culture interactions, knowledge sharing, psychological contracts and the existing theories regarding IT implementation in a CRM environment. The analysis was carried out as depicted in Figure 1 & 2, using effectively our refined frame work together with Willcocks and Harrow, 1992. Initially we discussed and compared the ‘Process’ in part 1 of the analysis. Further in part 2 we analysed the deviating patterns while discussing them, using distinctive contexts from Willcocks and Harrow’s framework, in light of the reviewed literature. An interesting finding has been that the distinctive contexts of the two cases have had less effect than the distinctive nature of CRM Systems and the implementation processes adopted. The study shows that irrespective of sectoral backgrounds the two organisations failed to address fully a range of common issues related to human behaviour, psychology, organisational characteristics, sub-cultural interactions and knowledge sharing. In our judgement these factors have greater explanatory power for the results achieved than the distinctive contexts in which the two organisations operated.

7.4.1 Part 1 summary

We summarise part 1 presenting the summary of our analyses regarding staff stability, user commitment, user training, and management support, interdependencies between subculture interactions, psychological contracts and knowledge sharing. We also present the similarities and dissimilarities from our findings in Figure 3 to enhance understanding of our analysis.

We found that staff stability at the senior management level at BCC was poorer compared with IBM. However, both sites lost their CEO before the completion of the project. End-user involvement was

missing and external user involvement was not considered. A learning organisational type of environment with reciprocity of relationships was missing at both sites.

User training duration at both sites was short. It was much shorter at IBM.COM. However, at IBM.COM, end-users were involved (as super-users) in the training process compared with BCC, where secondees involvement in the training process was minimal. The training did not impress the management at BCC and its inadequacy was openly criticised. While IBM management admitted the limitations of the training yet they perceived it to be sufficient. Management support at both sites in general was limited. IBM senior management were more unified in their approach towards the deployment of CRM Siebel than BCC, where strong differing opinions and perceptions caused a sub-cultural divide which trickled down to middle management and finally to end-user level causing severe staff retention issues.

We found that power based relationships and poor management support led to 'employee under-obligation' types of psychological contracts. We also found that end-users at IBM.COM stayed in the project discovering their own work-arounds through using their invisible colleges effectively. At BCC the secondees chose to leave and move back to their old jobs in the back-office. We conclude that psychological contracts play an important role in the sharing of non-codified/tacit knowledge in the form of 'tricks of the trade'. Interactions even though prolonged may end up in negative abrasion or an illusion of consensus at the surface of words. Our analysis has led us to believe that prolonged interaction combined with 'mutual high-obligations' types of psychological contracts based on shared benefits can facilitate a free sharing of the 'tricks of the trade'. Furthermore, sharing under these circumstances is not bound to a certain group of people but can take a new shape as it did in the case of IBM.COM. There it took the shape of a 'guru culture' where gurus shared information with other gurus from other hierarchies and business units. For a further summary of Part 1, see figure 7.4.

Staff Stability, User commitment, User training and Management support

- Staff stability at the senior management level at BCC was poorer compared to IBM. Both sites lost their CEO before the completion of the project.
- End-user involvement was limited and external user involvement was not considered.
- End-users at BCC decided to leave and returned to their back-office positions in order to get away from the Vertex managed contact centre. At IBM.COM end-users found their own work-arounds through social networks using their invisible colleges, giving rise to a 'guru culture' (Orlikowski and Tyre, 1994, Orlikowski and Iacono, 2001).
- User commitment at both sites was low, even lower at BCC as the secondees did not even want to stay in the CRM project.
- User training duration at both sites was short. It was much shorter at IBM.COM.
- End-users at both sites criticised the inadequacy of the training quite openly. Furthermore, the end-users felt compelled to use the system.
- Management support at both sites was poor in general. IBM senior management were more unified in their approach towards the implementation of their CRM project than BCC, where strong differing opinions and perceptions caused a sub-cultural divide which trickled down on to middle management and finally to end-user level causing severe staff retention issues.
- End-user psychological contracts with management at both sites were of 'employee under-obligation' type and failed to create a mutual perspective and a shared mental space.

Interdependencies between Subculture Interactions, Psychological Contracts, and Knowledge Sharing

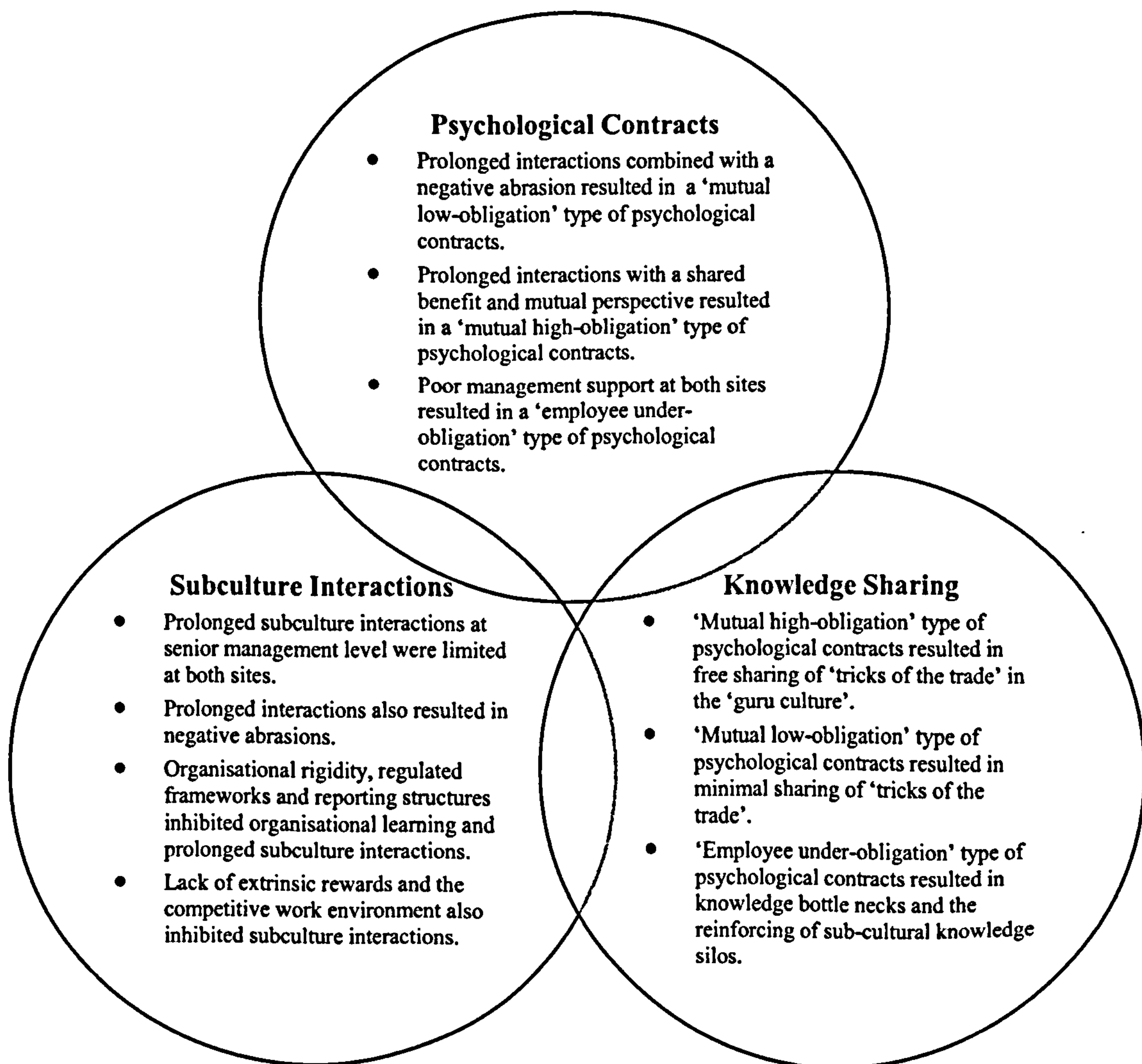


Figure 7.4 Summary of Part 1: Process analysis BCC and IBM.COM

7.4.2 Part2 summary

In this section we use Willcocks and Harrow's (1992) framework to present the similarities and dissimilarities in our analytical findings from both research sites from a knowledge management perspective. We also present a summary of our findings in Figure 4 to enhance understanding of the phenomenon. We intend to show that although there may be several differences, yet this research has identified many similarities between the two contrasting sectors.

We conclude that although the customer base in the two cases was different, the issues faced by the end-users were remarkably similar in nature. At both sites the end-users perceived the system to complicate and slow down their progress in securing an efficient customer service. Furthermore, end-users at both sites felt under compulsion to use the system but decided not to use it when the opportunity arose. No external customer involvement was considered by the senior management at either site. We also found that tacit/non-codified knowledge hoarding issues were related to job security and power. At BCC secondees used this power as an insurance to enable them to move back to their old jobs, whereas at IBM it resulted in a 'guru culture' giving rise to a clique type power structure where gurus only shared their 'tricks of the trade' with other gurus.

As per 2004, both sites were still in the process of securing their goal of providing an effective and faster service using a CRM system. BCC secured the 'call answering' target, helping the public to make speedy contact with the Council. However, this exposed discrepancies at the departmental level and pushed resources to their limits, resulting in a decline in commitment towards the CRM FrontLine project. At IBM.COM a segregated and mechanistic organisational architecture continued to haunt the CRM project resulting in knowledge silos along vertical and horizontal axes. A 'unified view' was hard to achieve as the end-users struggled with data misfit issues and duplications slowing down their progress.

We found that both sites used predominantly quantitative measures to control and monitor system usage. The quantitative measures did not include any financially related audits at IBM.COM. At BCC the

quantitative measures led to a dissatisfied departmental management. Knowledge became sticky and remained in the departmental and hierarchical sub-cultural silos. No knowledge management systems were in place at either site. A round table or a neutral platform for discussing and resolving CRM issues was absent at both sites.

We conclude that both sites faced severe difficulties in the implementation of their policies. At BCC the role of Central IT changed from a support function to a facilitator of system integration. However, this role did not get a chance to develop fully as the project changed its direction and became more focussed on short term results. The ambiguity of this dilemma had an adverse affect on the departments. At IBM the policies were ambiguous in the sense that CRM was supposed to unify and facilitate, and yet the end-users perceived it to be predominantly a controlling and monitoring device.

According to our analysis both CRM projects had relatively closed governance throughout the project life cycle. No end-user involvement was considered in the decision making process at either site. The competitive nature of the work at IBM.COM led to 'mutual low-obligation' types of psychological contracts between the business units. At BCC the alienation of secondees and departmental management in the project governance resulted in reinforcement of a knowledge silo type of culture. At BCC closed governance produced weak and disloyal types of psychological contracts (Janssens et al., 2003). We found that both projects had a strong senior management support initially. However, it lacked continuity as both CEOs left the project before its completion. Weak and 'employee under-obligation' types of psychological contracts between the stakeholders failed to produce reciprocal relationships. Both projects had a narrow stakeholder base and the system deployment was carried out without a thorough understanding of the existing environment.

Limited accountability used to be a feature common to both sites because of the 'part technology' strategy which allowed and promoted IS autonomy without any consideration of system integration. CRM initiatives according to our findings were designed to improve integration and accountability; however, implementations, with a top down approach only resulted in alienation and sub-cultural silos

at both sites. Fulltime working teams employed to see through a smooth implementation were unable to discover the poor state of legacy data prior to the implementation at IBM.COM. This data misfit issue had a negative affect on the CRM project. In both cases we conclude that the CRM systems were implemented without a thorough understanding of its impact on the available resources.

We found that BCC has been successful to some extent in providing telephonic access to the public. However, it has not secured a 'one-stop-service'. At IBM.COM a unified service was not possible due to the competitive environment. In both cases CRM solution was delivered without preliminary comprehensive business and cultural investigations. Implementations seem to have been rushed through without uncovering potential issues such as back-office data integration at BCC and data misfit issues at IBM.COM. Moreover, as a result of a top down implementation approach both organisations suffered in terms of stakeholder commitments at middle management and end-user level. Lack of commitment was also found at the senior management level at BCC.

In conclusion both projects were launched without thoroughly covering the issues such as data migration and information integration. There were no extra financial resources available at either site and projects were not able to obtain a broad stakeholder base. The departments at BCC and business units at IBM.COM were hesitant in volunteering their resources to obtain an overall system integration due to their lack of reciprocal and 'mutual high-obligations' types of psychological contracts. For a further summary see figure 7.5.

In the following chapter we discuss the main findings relating to the micro elements, namely psychological contracts and their impact on the success of the implementation of CRM systems from a knowledge management perspective. We present our research findings by summarising the theoretical, methodological and managerial contributions. Finally we summarise the limitations, possibilities and scope for future research, building on the foundations established by this thesis.

Contextual analysis at BCC and IBM.COM using Willcocks and Harrow (1992)

- Although the customer base in our two cases was different yet the issues faced by the end-users were remarkably similar in nature. At both sites the end-users perceived the system to complicate and slow down their progress in securing an efficient customer service.
- Both sites are working towards their goal to provide an effective and faster service using a CRM system. However, both sites have knowledge bottleneck issues and have not been able to deal with them successfully.
- We found that both sites used predominantly quantitative measures to control and monitor system usage. No knowledge management systems were in place at either site. A round table or a neutral platform for discussing and resolving CRM issues was absent at both sites.
- Our findings indicate that both sites suffered from part technology syndrome although CRM was deployed with the intention of integrating the separated departmental and business unit silos. In both cases a lack of cross-cultural communication based on 'mutual high-obligations' types of psychological contracts was absent. As a result knowledge sharing, particularly the sharing of 'tricks of the trade', was limited.
- We found that both CRM projects had relatively closed governance through out the project life cycle. No end-user involvement was considered in the decision making process at either site.
- We found that both projects had strong senior management support initially. Sponsorship at the senior level lacked continuity as both CEOs left the project without seeing it through to completion. A mutual perspective and shared understanding regarding the usefulness of CRM system was absent at both sites.
- Both sites had limited accountability because of the 'part technology' strategies which allowed and promoted IS autonomy without any consideration of system integration. CRM initiatives according to our findings were designed to improve integration, however implementation with a top down approach only resulted in alienation and sub-cultural silos at both sites.
- In both cases we conclude that the CRM systems were implemented without a thorough understanding of their impact on the available resources. Resources were thus overstretched as a result of a poor implementation planning.
- There was some lack of professionalism at both sites in that they did not investigate the existing environment fully prior to implementation. Both sites had dissatisfied end-users as per 2004. Furthermore, lack of external customer involvement did not help in establishing a broad stakeholder base.
- In both cases whether the directives were from the Government or from the Board of Directors, they ended up delivering a solution without preliminary comprehensive business and cultural investigation.
- Furthermore, both projects were launched without adequately investigating key issues such as data migration, information and cultural integration. There were no extra financial resources available at either site. Very little 'float' was given in both projects due to time constraints.

Figure 7.5 Summary of Part 2: Contextual analysis BCC and IBM.COM using Willcocks and Harrow (1992)

Chapter Eight

Conclusion

8.1 Introduction

This chapter summarises the findings of this research which focussed on the implementation of a new technology, namely a Customer Relationship Management (CRM) system, from a knowledge management perspective in contemporary (1999-2004) situations within Birmingham City Council and IBM.COM. A specific focus was given to areas neglected in previous CRM studies: sub-culture interactions, psychological contracts, how tacit knowledge - including in the form of what Orlikowski, Vincenti and others have called 'tricks of the trade' 'work arounds', 'short-cuts', 'special know-how' - surfaced and were shared, and with what effects on implementation. The research, using two case studies, investigated how CRM system stakeholders and the system itself evolved through encountering barriers, sharing knowledge, finding new uses and inventing work-arounds. A rich picture emerged of sub-cultural silos of knowledge linked with psychological contracts and power-based relationships influencing and inhibiting adoption and acceptance of the CRM system.

One part of the research involved a rigorous reviewing of the existing literature. The review discussed and critically analysed the existing academic understanding implementation processes of IT systems and their role and impact in organisational cultures. Five research literatures relevant to this study were usefully brought together to provide a lens for analysing our selected case histories. These studies covered IT implementation, organizational cultures and sub-cultures, knowledge and its sharing, psychological contracts, and Customer Relationship Management (CRM) systems. The literature review chapter considered and critiqued each in turn.

The review used Pettigrew's (1985, 1990) framework as a suitable basis for analysing the existing implementation theories, linking them with organisational culture, knowledge management and psychological contracts as key ingredients in the internal context (Pettigrew, 1985, 1990, 1997). It identified key sub-cultures and discussed subculture gaps from a knowledge management perspective. It also assessed knowledge sharing aids/barriers across key sub-cultures and the impact of these aids/barriers upon implementation. A CRM environment suited the investigation of knowledge sharing

issues. This is because the success of a CRM system is highly dependent on the transfer of knowledge from the back to the front-office, which is essential in giving a good service to the external customers and achieving successful resolutions of customer queries. An investigation of psychological contracts and their interdependencies with subculture interaction and knowledge sharing enhanced our understanding regarding the successes and failures of customer queries.

The themes emerging as a result of the review were used to construct an analytical framework which then guided the data collection and the initial analysis in a pilot study. The results of the pilot analysis were used to revise and expand the framework as necessary, prior to collecting the final data. The revised framework and the refined research questions formed the basis for further empirical work. The final data was collected using thirty (fifteen at each site) semi structured interviews.

In the primary part of this study, our full access to the research sites and data triangulation resulted in a very rich collection of data which was then critically analysed in the light of our reviewed literature in cases one and two. Our refined framework adopted from Pettigrew's (1985, 1990) six categories model contributed to developing a deeper insight into the contemporary situations and understanding the phenomena at our research sites. A within-case analysis was carried out in both cases, critically analysing the micro mechanisms, (in this research the psychological contracts, underlying the development of 'mutual perspective taking', 'shared mental space', 'T-shaped skills' and 'knowing of what others know') and their interdependencies with subculture interactions and knowledge sharing in the light of our revised literature.

The case findings were further compared in a cross-case analysis to enhance our understanding of the impact of micro elements in the success of the implementation of a CRM system. The framework previously used in within-case analyses was again utilised to discuss deviating patterns and similarities from both research sites. The deviating patterns and similarities in the adaptation of CRM systems were investigated and compared in order to gain further insight into the linkages between knowledge sharing, subculture interaction and psychological contracts in a CRM environment. The cross-case analysis also

made good use of the comparative framework by Willcocks and Harrow (1992) as outlined in our methodology chapter. Initially we discussed and compared the 'Process' in part 1 of the analysis. In part 2 we analysed similar and deviating patterns, discussing our findings and relating them to distinctive contexts using Willcocks and Harrow's framework in the light of our reviewed and revised literature. The findings were summarised and presented using our deployed frameworks at the end of the cross-case analysis.

In the present chapter we discuss the main findings relating to the micro elements, namely psychological contracts and their impact on the success of the implementation of CRM systems from a knowledge management perspective. We present our research findings by summarising the theoretical, methodological and managerial contributions. Finally we summarise the limitations and the possibilities and scope for future research, building on the foundations established by this thesis.

8.2 Research Contributions and implications

This research attempts to provide a useful contribution towards understanding the implementation of Customer Relationship Management (CRM) systems from a knowledge management perspective. Our study of previously neglected areas (psychological contracts, subculture interactions and less codified knowledge sharing) and their interdependencies presents an enhanced understanding regarding the implementation of a new technology. A rich picture, consisting of sub-cultural silos of knowledge linked with psychological contracts and power-based relationships influencing and inhibiting adoption and acceptance of the CRM system, seeks to make a fresh contribution to this area of research. The three main contributions namely, theoretical, methodological and managerial are discussed below.

8.2.1 Theoretical contribution

This research - by integrating existing IS implementation literature with sub-cultures, less codified knowledge sharing and psychological contracts in the implementation of a new technology - provides a novel lens through which to demonstrate the importance of the micro elements.

The recent implementation studies such as Ross (2003) provide only another phased approach at a macro level. Our study has attempted to investigate the process of implementation at a micro level and has demonstrated the importance of underlying psychological contracts in sub-cultural interactions from a knowledge sharing perspective. We chose to investigate the above mentioned micro elements in a CRM system implementation environment, where knowledge sharing becomes a vital element to effective system integration.

Furthermore, this research has investigated Roger's (1983) 'complexity' concept from an implementation perspective i.e. the degree to which a CRM (Customer Relationship Management) implementation is perceived as difficult to understand. Different sub-cultures may not be able to communicate with each other if the implementation is not communicated and understood. Examining this communication from a knowledge management perspective has helped us to assess the knowledge sharing barriers that inhibit the sharing of knowledge across sub-cultures and thus delay a successful implementation of a technical innovation.

In the implementation studies so far, the importance of knowledge sharing and shared psychological contracts is implicit, but not fully explicitly stated or researched. Davidson (2002) argues how frames (frames are cognitive structures or mental models that are held by individuals) and shifts in frame salience influence sense-making during requirement determination. Our study has helped with the understanding of how interpretive power is exercised in an IS project. Moving on from frames to shared frames, Orlikowski and Gash (1994) show shared frames as closely related to the concept of sub-cultures. Individuals, drawing on their shared frames, engage in symbolic action and thereby construct a social reality that reflects their common assumptions, beliefs and understandings and that includes particular rules, rituals and customary practice. According to Geertz (1973) and Van Maanen and Barley (1985), sub-cultures rely heavily on cognitive elements such as common frames of reference. The perception of different stakeholders regarding the success of the implementation process of the CRM system is an important factor, and proves the usefulness of this research.

While the literature on organisational culture is large, that referring explicitly to IT implementation is surprisingly small. The management literature is replete with various subsequent attempts made to improve communication and participation between the sub-cultures in order to enable a successful implementation of an IT system (Wright-Cummings, 1997). However, these efforts have rarely investigated the factors enabling and inhibiting communication across sub-cultures from a knowledge sharing perspective.

Our study has investigated the implementation process of CRM with a special focus on the 'transformation' part. By using the existing theories of IT implementation it probed the adaptation and acceptance of the system by its stakeholders. That is, how the stakeholders of the system and the system itself were evolving through finding new uses, workarounds, upgrades, patches, cookies, viruses, and failures in the, so called societal and organisational transformation process. The study has investigated how the 'tricks of the trade' and know-how born in the minds of the stakeholders of a system are shared across the sub-cultural boundaries and the impact of such sharing on the successful implementation of a new technology. The present research thus contributes to the field of cultural studies by analysing in-depth sub-cultural interactions at a micro level and its resulting distinctive perspective on the implementation process that might result.

Previous studies talk about the importance of a 'mutual perspective', 'T-shaped skills', 'knowing of what others know', 'shared context for knowing', 'prolonged interactions' and 'creative abrasion' in the sharing of less codified knowledge. However they do not fully address the micro processes that lead to the above. This study fills the knowledge gap by investigating psychological contracts and uses them as a lens to probe into and obtain an improved understanding surrounding the process of a 'mutual perspective taking'. We expanded the investigation of probing further the process of a 'mutual perspective taking' by taking into consideration the interdependencies between sub-cultural interactions, less codified knowledge sharing and psychological contracts.

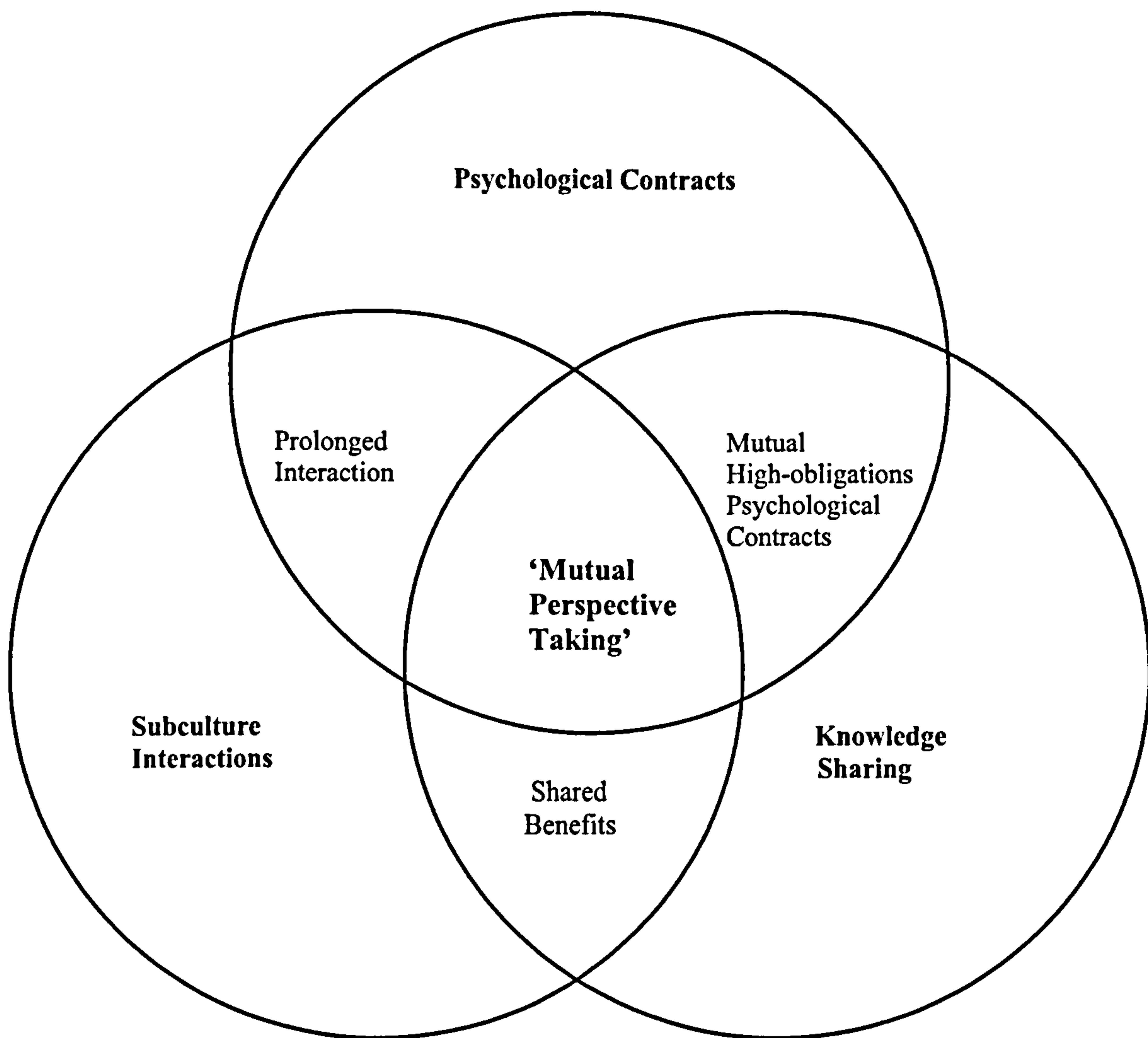


Figure 8.1 Close relations between Psychological Contracts, Subculture Interactions and Knowledge Sharing

By integrating findings from scholars like Shore and Barksdale (1998) and Janssens et al. (2003) we have thus enhanced our understanding concerning the significance of micro elements (in our case psychological contracts) – those elements that lead to a ‘mutual perspective taking’ in facilitating a free sharing of ‘tricks of the trade’ ‘work arounds’, ‘short-cuts’, ‘special know-how’ across sub-cultures in the implementation of a new technology. We found that prolonged interactions can also result in negative abrasion and result in ‘mutual low-obligation’ types of psychological contracts thereby inhibiting the sharing of less codified knowledge across the sub-cultural boundaries. See Figure 9.1 for an overview of the research and one part of its conceptual contribution.

The present study leads us to believe that prolonged interaction combined with ‘mutual high-obligations’ types of psychological contracts based on shared benefits can facilitate a free sharing of personal tacit knowledge. Furthermore, sharing under these circumstances is not bound to a certain group of people but can take a new shape as it did in the case of IBM.COM. There it took the shape of a ‘guru culture’ where gurus shared information with other gurus from other hierarchies and business units. We also found that power based relationships led to ‘employee under-obligation’ types of psychological contracts which consequently reinforced the knowledge silos.

Finally we used our integrated lens based on our multidisciplinary approach to probe the implementation of a CRM system. CRM in the form of a new technology is emerging as a key element in system integration. It has attracted a lot of attention but also, according to such as Tafti (2002), has experienced a failure rate of up to 70% thus making it an interesting subject for this research. CRM systems remain relatively understudied academically. Linkages between knowledge sharing, sub-culture interactions and psychological contracts also remain understudied in the implementation of a CRM, or indeed any other, system. Our study fills the above gap by using our integrative probing approach in investigating the knowledge sharing mechanisms involved in the implementation process. A CRM environment suited the investigation of knowledge sharing issues. This is because it is so dependent on the sharing of knowledge from the back to the front-offices in order to provide a good service to external customers and achieve successful resolutions of customer queries. The investigation of psychological contracts and their links with knowledge sharing enhanced our understanding of, for example, customer query successes and failures. Thus our study provides a novel theoretical contribution by using a multidisciplinary approach and enhances understanding of the underlying factors – also known as micro elements in this research – in the process of knowledge sharing across sub-cultural boundaries.

This study focused on the process of ‘adaptation and acceptance’ of the system, covering both the internal and external customers as part of the stakeholder analysis. The research in particular, studied the knowledge sharing loop between the front and back-office of the CRM project in order to identify

and investigate the knowledge silos. Sponsorship of CRM according to Goodhue et al. (2002) is initiated by senior management. This research investigated the involvement of senior management and the grassroots/end-users (internal customers) including the external customer and its impact on the 'adaptation and acceptance' of the CRM implementation. Our findings show that the window of opportunity to adopt the system closes fairly quickly if the project fails to establish 'mutual high-obligations' types of psychological contracts between the stakeholders. Not only did the stakeholders withhold their 'tricks of the trade' 'work arounds', 'short-cuts' and 'special know-how' but it also resulted in a narrowing of the stakeholder base as the stakeholder commitment to the project decreased reinforcing the departmental/business-unit knowledge silos. This study also found that sub-cultural silos act as an inhibitor to overall system integration and that subculture integration is an important element in achieving a so called 'one-stop-service'.

In conclusion, this research has attempted to secure an enhanced understanding with related to the micro mechanisms in the knowledge sharing processes in the implementation of a CRM system. The multidisciplinary approach helped us to take advantage of the existing literature in designing a lens best suited to probe the micro elements of knowledge sharing processes across the sub-cultures in the implementation of a CRM system. The above approach facilitated our quest to understand the interdependencies between subculture interactions, psychological contracts and knowledge sharing. We found that the success of prolonged interactions in achieving a free sharing of less codified knowledge is strongly related to underlying psychological contracts.

8.2.2 Methodological Contribution

This study was conducted using an in-depth longitudinal approach, effectively an adapted-for-use, extended version of Pettigrew (1990, 1997). This research has been of a processual type investigating the CRM implementation phenomenon using two case studies. The five guiding assumptions for processual research proposed by Pettigrew (1985, 1990 and 1997) provided an appropriate framework for gathering data using altogether fifty semi structured in-depth interviews.

The implementation process was studied and critically analysed over a period of three years both along the vertical (hierarchical) and horizontal (cross-organizational) axes. It helped us to investigate sub-cultural interactions at different levels of hierarchies. We critically analysed the development of psychological contractual issues responsible for the sharing of 'tricks of the trade'. The process of implementation of a CRM system was also studied analysing the historical context and linking it with the present contemporary situations at our research sites. We found the processual approach suited this research well as it helped in understanding the knowledge sharing issues in a holistic dimension. The longitudinal approach also helped in gaining insight into the micro mechanisms of subculture interactions at different levels of hierarchies at both research sites. This approach enabled us to maintain a continuous close contact with the data and the subjects thus enriching our findings.

The research questions generated as a result of the literature review enabled construction of the semi structured interview guidelines for collecting data from IBM.COM and Birmingham City Council. The results gathered from data analysis through analysis, led to increased understanding and insights into the implementation process of a new technology namely a CRM system. The questions and themes arising from the literature review that formed the basis of the objectives of this study contained a number of 'why?' and 'how?' questions. Therefore qualitative methods were considered appropriate for gathering the data required (Hyde, 2000).

This research used the four paradigm model as a frame (Burrell and Morgan, 1979) in obtaining an enhanced understanding of the area of research, namely the implementation process of a CRM system. The four paradigms helped us to probe into the reasons why stakeholders have differing perceptions regarding the implementation process of an IT system. A predominantly qualitative approach was used to understand the cause of perceptions of different stakeholders. Our study used Burrell and Morgan critically and challenged the argument that locating inside any one paradigm forecloses the possible use of the others – the incommensurability argument (Mingers and Gill, 1997).

Even though this research is predominantly in the functionalist sociology paradigm, the fact that it tends to move towards social relativism cannot be ignored. To identify the enablers and inhibitors of the implementation process of a CRM system, it was vital to take into consideration the perception of stakeholders of the system. The stakeholders had differing perceptions which resulted in divided opinions 'employee under-obligations' and mutual low-obligation' types of psychological contracts. A more ontological and qualitative perspective was helpful in understanding the differing stakeholders perceptions. However, this made our research not limited to only one paradigm. The understanding of the perceptions and different approaches to implementation is distinctly ontological and qualitative, rather than epistemological. The use of probing in semi structured in-depth interviews helped to uncover the subjective understanding and cultural sensitivity of the perceptions of different stakeholders of the implementation process.

We piloted our data collection at both research sites using general types of research questions arising from our initial literature review using a data triangulation, combining retrospective and real time analysis. Data was then analysed using Pettigrew's five fold framework to enhance our preliminary understanding of the phenomenon at both research sites. We chose the manual colour coding of data in order to maintain our closeness to the collected data. By coding the data manually we were able to identify and better present the emerging issues under relevant themes in our analytical framework.

The pilot study helped in refining our reviewed literature, research questions and our analytical framework, in better preparing us for the final data collection and its analysis. This research, unlike many others, shows the development of our research process by showing its stages of probing the surface of CRM implementation phenomenon at different intervals. The probing of our sites at different intervals over a period of two years helped us to present a holistic view of knowledge issues and their interdependencies with sub-cultural interactions and psychological contracts. This research was able to follow the stakeholders and how their perceptions regarding the system changed over time, thus confirming the closure of the window of opportunity as described by Orlikowski in our reviewed literature.

Different industrial sectors were chosen (private and public sector). Using a theoretical justification provided by Pettigrew (1989) polar types to exploit planned opportunism was followed. This approach produced an excellent opportunity for comparison and contrast. In order to increase the ecological validity of the findings two different organisations were chosen - one public and one private sector. The deviating patterns and similarities of the phenomenon were investigated and critically analysed using Willcocks and Harrow (1992).

An interesting finding has been that the distinctive contexts of the two cases have had less effect than the distinctive nature of CRM Systems and the implementation processes adopted. The study shows that irrespective of sectoral backgrounds the two organisations failed to address adequately a range of common issues related to human behaviour, psychology, organisational characteristics, sub-cultural interactions and knowledge sharing. According to our research findings these factors have greater explanatory power for the results achieved than the distinctive contexts in which the two organisations operated.

This research has applied a multi disciplinary approach in order to produce a rich picture revealing knowledge issues in the implementation process of a CRM system. The whole research process has worked to get a closer and better understanding of the micro elements that lead to a 'mutual perspective' and 'shared context for knowing'. We have been able to probe deeper using the longitudinal approach over a long period in order to understand the strengths and weaknesses of CRM projects at both research sites. The holistic and processual approach has attempted to produce an enhanced understanding of the phenomenon and has secured a deeper insight into issues leading to technology and knowledge bottlenecks at a micro level in the implementation of a CRM system.

8.2.3 Managerial Contributions

We have been able to study real life issues in the light of existing academic theories. We see this research also as making a novel contribution at the practitioners level. This research has several managerial implications. We discuss each one of them in detail.

8.2.3.1 Broad /Narrow stakeholder base

This study has attempted to investigate the implementation process of a CRM system with a special focus on the 'transformation' component. By using existing theories of IT implementation it attempted to investigate the 'adaptation and acceptance' of the system by its stakeholders. That is, how the stakeholders of the system and the system itself are evolving through finding new uses, work-arounds, upgrades, patches, cookies, viruses, and failures in a 'so called' societal and organisational transformation process (Orlikowski and Iacono, 2001).

The decision makers need to have an understanding of the inhibitors to the implementation process of an IT system and of how to work their way around those inhibitors. They need to interact as flexibly as possible both formally and informally so as to understand the perception of other stakeholders regarding a new system. It is not the formal meetings that necessarily give valuable information regarding the perceptions of the users of the system, but rather the informal conversations that can remove misunderstandings and give an insight into any perceived implications and difficulties other stakeholders may be experiencing. To unleash the power of tacit knowledge in an organisation the sharing of such tacit knowledge must be managed differently from explicit knowledge. Many of the traditional methods of knowledge diffusion like manuals and lectures are unsuitable for tacit knowledge sharing. Different methods like apprenticeship, direct interaction, networking and action learning which include face-to-face social interaction and practical experiences are more suitable for supporting diffusion of tacit knowledge. Decision makers can facilitate focus groups, steering groups and interest groups to enable regular meetings to improve face to face interaction between the stakeholders of the system. The interactions between the decision makers, internal as well as external users of the system

and experts of the system such as CRM are vital for the system development. This study also signified the need for educating stakeholders in understanding how they can play a part time marketers' role thus facilitating the process of implementation.

Both internal and external customers were kept in the focus of this study. Most post-mortems of CRM failures trace the problems back to the alignment of incentives and metrics, and the absence of a customer-facing organisation. Another pitfall has been to concentrate on the customer contact processes without making corresponding changes in internal structures and systems (see for example, Digby, Reichheld, and Scheffer, 2002). This study focussed on the process of 'adaptation and acceptance' of the system, covering both the internal and external customers as part of the stakeholder analysis. The research, in particular, studied the knowledge sharing loop between the front and back-office to identify and investigate the knowledge silos. Sponsorship of CRM, according to Goodhue et al. (2002), is invariably initiated by senior management. The study investigated the involvement of senior management and grassroots, including the external customers, and the impact of their respective involvement on the 'adaptation and acceptance' of the CRM implementation.

Previous studies on CRM have emphasised the importance of having a broad stakeholder base. However, they have not been able to discuss the details regarding micro mechanisms enabling/inhibiting the establishment of a broad stakeholder base. Previous studies point out the importance of a project champion playing a key role in the successful implementation of a CRM implementation. Our research points out how the discontinuation or leaving of such a project champion can have adverse affects on the success of the project. Our study also points out that psychological contracts play an important role in stakeholder commitment to the CRM project. We found that 'employee under-obligation' contracts not only inhibit the free sharing of less codified knowledge but also weaken stakeholder commitment. We saw how stakeholders at different hierarchical levels of BCC left the project as a result of their weak and 'employee under-obligation' types of psychological contracts with the management; also at IBM.COM how weak psychological contracts again led to users finding their own work-arounds and establishing new sub-cultures.

This study highlights and confirms previous IS studies in emphasising internal and external customer involvement. In our study a broad stakeholder base was not achieved as the stakeholders at the lower levels of hierarchies lacked a sense of ownership of the system and the entire 'change' project. End users and lower management felt alienated as a result of a predominantly top down approach. This research suggests the use of both 'push' and 'pull' methods in order to establish a broad stakeholder base and promote ownership at all levels. This study further suggests that the success of a CRM System implementation depends on all users sincerely believing in the system and its benefits. Users involvement in the decision making process is thus highly recommended. We found that the system remained highly dependent on the input of data by its users. The fact that end-users are ultimately the process owners cannot be denied, and must be addressed rather than neglected, as at both our research sites.

We also found at both sites that lack of clarity of objectives and differing stakeholder perceptions at different levels of hierarchies gave an illusion of consensus. This research suggests that realistic goals should be set and objectives discussed in a creative abrasion type of environment in order to establish clarity towards the company objectives. Factors such as the degree of technical proficiency of employees, effectiveness of current systems and processes, and management commitment will impact both the timeline to, and the degree of, success. The objectives and underlying benefits of deploying a CRM system need to be understood by all the stakeholders prior to an implementation.

8.2.3.2 System Integration

Most people agree that system integration is desirable. However system integration has also a downside. The challenge is to understand and manage the negative aspects of integration to minimize the adverse effects. Doing this requires an awareness of the potential problems. This study points out that system integration is a great deal more than an integration of hardware. EAI (Enterprise Application Integration) is not limited only to hardware. Our study promotes a business need driven integration strongly favoured by the existing organisational sub-cultures. Our research suggests that without a sub-cultural

integration based on 'mutual high-obligations' types of psychological contracts the implementation of a CRM system has less chance of success. We also conclude, from our findings, that prolonged sub-cultural interactions based on shared and mutual benefits and strong mutual psychological contracts result in a free sharing of less codified knowledge. The promotion of such a free sharing is highly important to cultural integration to accomplish system integration.

Further, we suggest that management needs to facilitate the above sub-cultural integration by providing formal and informal neutral meeting places. These neutral meeting places can be in the form of CRM sponsored clubs, discussion groups, round tables or formally organised weekly/monthly CRM discussion days. The above neutral places can act as non-threatening platforms to discuss CRM issues. Managers should act as facilitators to grasp the knowledge created through the above neutral meeting places and then exploit it, effectively reinforcing the cultural and system integration. Our study shows how a lack of sub-cultural integration resulted in knowledge silos and digital divides. To overcome such technology and knowledge bottlenecks, a sub-cultural integration based on shared benefits needs to be promoted and rewarded.

A competitive environment where business units withhold information and less-codified knowledge inhibits sub-cultural integration. A learning organisational type of environment needs to be promoted where team efforts are rewarded, both extrinsically and intrinsically. Working in teams across the sub-cultural boundaries can overcome the technology and knowledge bottlenecks. In the same way, and by the same methods by which individuals find their work-arounds, the teams will be able to find their own work-arounds to overcome the technology bottlenecks, by using their invisible colleges to support a successful resolution of any business issues. As a result the creation of a business intelligence type of environment, where individuals will be willing to share their 'tricks of the trade' based on shared benefits and rewards can be made possible.

8.2.3.3 Psychological Contracts and their interdependencies with subculture interactions and knowledge sharing

Our study probed the implementation process of a CRM system using the lens of psychological contracts and their interdependencies with sub-cultural interactions and knowledge sharing. We found that psychological contracts play an important role in the sharing of less codified knowledge. We also found that prolonged sub-cultural interactions when combined with a ‘mutual low-obligation’ type of psychological contract can also result in negative abrasion. This negative abrasion impedes a free sharing of less codified knowledge.

According to our findings prolonged interactions where individuals do not feel threatened by each other and have shared benefits, result in ‘mutual high-obligations’ types of psychological contracts. These types of contracts facilitate a free sharing of knowledge across the cultural boundaries, assisting in cross-cultural communication. As the current literature says little about the role of psychological contracts in a CRM environment, our study will be useful to CRM Project Managers in understanding the micro elements important in the sharing of less codified knowledge and information across business unit boundaries. This will help in reinforcing a holistic EAI strategy.

The findings of our study which investigated various scenarios and how they result in different types of psychological contracts will also be useful to senior management in enabling them to understand the implications of psychological contracts thus equipping them better to understand issues related to data migration, staff retention and end-user commitment.

Finally, our study investigated the relationship (R) part of CRM. It points out the importance of paying attention to the needs of the stakeholders including internal and external customers. Managers ought to facilitate the reciprocity of relationships across the business unit boundaries and facilitate relationship building not only with the external customer but also within the organisation, not forgetting the internal customers who are also the end-users of the system. An ultimate goal is to build strong enough bonds

with internal and external customers so that all share common values and purposes, and want to work together in achieving such goals. This will lead to the development of a 'mutual high-obligations' type of psychological contract which is an integral component of mutual commitment enabling people to work together so that everyone benefits.

Once trust between the managers and the end-users is established, it can lay the groundwork for a 'mutual high-obligations' type of psychological contract. Such a contract will be based on mutual understanding/benefit and reciprocal trust and commitment. The end-users will thus be able to see the managers as enablers and not as controllers of their work. The more this happens, the deeper the psychological contract will become. The violation of such a contract as shown by our findings results in mistrust and non-reciprocal relationships leading to work-arounds and short cuts discovered to fulfil the needs of the system and in order to carry out the jobs. Managers need to align their mission, vision, values and purpose with a service orientation. They need to grasp and understand the end-users' perceptions, by looking at things from their perspective, rather than only from their own perspective.

Motivation and commitment also an important component of a strong psychological contract are, according to our findings, related to the provision of both intrinsic and extrinsic rewards. We saw how end-users at IBM.COM worked together on their own initiatives across the business units when they had shared benefits related to their teamwork. Not only did it produce commitment but also intrinsic rewards in the form of job satisfaction sharing freely their 'tricks of the trade' with each other.

CRM Managers need to enable a close relation between the psychological contracts, subculture interaction and knowledge sharing. In order to promote the above three elements, a facilitative style would be more preferable to a monitoring one.

Facilitating interactions across the business units both formally and informally with shared benefits attached can produce 'mutual high-obligations' types of psychological contracts and consequently a

non-threatening environment. This non-threatening environment can act as an arena for a free sharing of less codified knowledge in the form of ‘tricks of the trade’ work arounds, short cuts and favours, all working towards the goal of a successful resolution of an issue. The ensuing results when rewarded extrinsically by the management will continue to preserve and promote a learning organisation type of environment where people feel free to admit to making mistakes and are encouraged to learn from them. This will contribute to a sense of intrinsic reward. The above cross cultural relationships with strong underlying psychological contracts will act as a catalyst promoting the overall success of system integration within an organisation.

8.3 Limitations and reflections

Under this section we identify the limitations of this research and discuss them as opportunities for future research. Even though we covered both public and private sectors in order to provide a set of similarities and dissimilarities related to IT implementation, the limitation of its confinement to only two case studies, and to two sectors in developed economies cannot be denied. We also focussed more closely on the implementation process rather than the CRM technology itself. Future studies should focus more on the CRM technologies and probe further into issues relating to its architectural design and whole project life cycle.

The overall research challenge in our comparative longitudinal study was to examine the linkages between content, contexts and process over time in order to obtain the rich picture of the knowledge sharing phenomenon. This study sought to capture the reality of non-codified knowledge sharing, in the introduction of a new technology, in flight. We amalgamated our theoretical framework with Pettigrew (1985) in revealing the process ingredients of tacit knowledge sharing across the identified key sub-cultures. This can be seen as a weakness. However, in doing so we were able to link the process with internal and external contexts and elucidate the history behind sub-cultural knowledge silos. We were able to disentangle the origins of these silos and identify patterns/continuities.

The study used a qualitative approach due to the nature of the research subject and questions. The questions using 'how' and 'why' could not be answered satisfactorily using quantitative techniques. The data gathered through the qualitative approach using semi structured in-depth interviews contained qualitative information and the analysis of such information is a complex issue. However, the results obtained relate to real life situations and as such are a valuable source of information. The processual or longitudinal approach used by us had to cope with personal bias and subjectivity v objectivity. We had to struggle through to maintain the data as bias free as possible. This study could have expanded the data collection triangulation by doing an additional survey using quantitative methods. As it was, a vast amount of data was collected and time limitations did not allow us to proceed additionally along a quantitative route.

The fact that this study moves away from its original functionalist sociology paradigm towards social relativism can be seen as a limitation. However, a more ontological and qualitative perspective enhanced our understanding with regard to differing stakeholders perceptions. By remaining in the original paradigm we might have limited the derivation of the results leading to a rich picture. We were bold in challenging Burrell and Morgan (1979). However to obtain the changing stakeholder perceptions over a period of three years we found it necessary so to do.

The literature using a multidisciplinary approach was chosen under five themes; IT implementation, culture, knowledge management, psychological contracts and CRM. The knowledge management covered mainly the tacit knowledge barriers. It did not go into detail to discuss the explicit part of the knowledge sharing. The use of a multidisciplinary approach did enable the investigation of micro elements such as psychological contracts although this made the literature vast. Other themes discussing the fusion regarding technical innovation could have been included. We could also have expanded the CRM part and discussed it in a greater detail. However this would have made the literature review even lengthier. The initial literature review resulted in broader types of questions which needed to be refined. This was achieved by conducting pilot/initial case study. This helped us to refine not only the research questions but also helped in testing the appropriateness of our chosen methods.

The semi structured in-depth interviews undertaken took much longer than anticipated due to the absence of key stake holders during the summer breaks. The qualitative data collected needed a thorough analysis which was time consuming and put pressure on time management. Interview dates had to be changed several times to suit the availability of the subjects. However a good relationship and professional attitude was maintained throughout the interactions, before during and after interviews. Manual colour coding, though cumbersome, was preferred to a computerised method, because this sharpened the awareness of the researcher to the interrelated issues involved.

Despite the above mentioned limitations our research was able to gather rich data, and using our lens of psychological contracts penetrated major underlying factors influencing knowledge sharing across the identified key sub-cultures at our research sites. Our study has also helped us to realize the importance of conducting research in such a way that the real issues faced by practitioners out in the field are addressed, and linked with the existing academic theories from several disciplines through a rigorous analysis thus producing a rich picture of the phenomena.

The longitudinal research form adopted to conduct this study helped us to gather the perceptions of the stakeholders of the system over a period of three years. We found that perceptions regarding the CRM project changed over time as stakeholders interacted on a prolonged basis with one another. We were thus able to identify the factors that promoted or impeded the establishment of ‘mutual high-obligations’ types of psychological contracts in these interactions and their impact on the success of the CRM projects at BCC and IBM.COM. The research findings highlighted the importance of psychological contracts in understanding the factors leading to technology and knowledge bottlenecks.

8.4 Directions for further research

As mentioned previously, this was a small scale study carried out to investigate the implementation process of an IT implementation through a lens of psychological contracts exposing the significance of micro level elements. This study lays a good foundation for further research along the route of

investigating other micro level elements in the process of implementation of a CRM system in order to enhance understanding of such phenomena in a contemporary situation. This could involve research based on five City Councils in the UK compared with five blue chip companies to further the understanding of micro elements affecting knowledge sharing issues in the implementation of CRM systems. This would help to achieve an improved understanding of the CRM implementation process and so could aid in the reduction of current high failure rates. The above may also help in widening and enhancing the existing understanding of the implementation process of other technical innovations.

There was an era when IT was looked at as a gadget (part technology era) and nothing else. This gave rise to the dot.com bubble. The bubble did burst, and an era making IT as an essential part of business systems arrived, giving rise to business process re-engineering and desirable enterprise applications to promote system integration. CRM as part of the system integration is a well talked about yet relatively under researched area. We are heading towards an era where the fabric of CRM needs further clarification. Dispute over cultural boundaries was highlighted and discussed in this research using the lens of psychological contracts, showing a cultural gap between the social and techno cultures. It would be interesting to look at the techno culture itself in greater depth from a technology perspective that is what one might call the 'culture behind the clicks'. This research did not go into any great depth in the technological fabric of CRM. This fabric deserves to be explored further. It would be interesting to highlight the technological issues faced at a micro level in the CRM project. This will be a way to work against the fear of IT and enhance our understanding regarding technological issues from a technical perspective. We also propose further research using a multidisciplinary approach in testing the psychological contracts and its interdependencies with sub-cultural interactions and knowledge sharing from an international perspective. This research was limited to the UK only. It would be useful to compare the interdependencies between psychological contracts, subculture interactions and knowledge sharing across the high context and low context culture nations. A comparison with relatively high context culture nations like Japan and China will enhance our understanding concerning enablers and inhibitors to the sharing of tacit knowledge in the implementation of CRM systems.

8.5 Final Word

We have attempted to catch the reality of knowledge sharing issues in flight and yet are very aware of the fact that we have only managed to capture a snapshot of such a reality. Our findings were based on observations, historical data gathering and semi structured in-depth interviews. We visited our research sites frequently. However, we were not able to live the experiences of the stakeholders fully. Our interactions and data gathering had their limitations and are by no means perfect. It was difficult to get hold of subjects at both sites and even though a good working relationship was maintained at all times, there were issues such as time constraints that could not be ignored.

There are also issues regarding incommensurability of knowledge regimes. The distinction between tacit/non-codified knowledge and explicit/codified knowledge is not, however, clear but problematic. According to scholars such as Polanyi it is impossible to separate tacit/non-codified knowledge from explicit knowledge. Polanyi (1969) has pointed out that, "These two are not as sharply divided as we might think. While tacit/non-codified knowledge can be possessed by itself, explicit/codified knowledge must rely on being understood and applied in a tacit/non-codified manner. Hence all knowledge is either tacit/non-codified or rooted in tacit/non-codified knowledge." Also, the attempts to separate these two dimensions of knowledge may only produce perceptive information regarding a situation. One could also ask a question, whether it is beneficial at all to promote the integration of knowledge across the sub-cultural boundaries. The adoption of common practices and artefacts may enable knowledge integration in the near term but may fail to address significant underlying differences. It can be useful to understand these underlying differences in promoting what Thompson and Walsham (2004) call 'knowing' and yet an attempt to integrate or share tacit knowledge may reduce the compatibility and overall performance of individuals within an organisation. There are also other hurdles such as national cultural barriers which we have not discussed in this research. We conclude that promoting of knowing may be beneficial and yet there is a trade-off attached to it. Furthermore, 'knowing' in situations like IBM.COM - one of our cases - may be difficult or almost impossible due to the highly competitive business environment.

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Appendices

Appendix A: Interview guidelines for the Pilot/Initial Analysis

Appendix B: Interview Guidelines for final Data Collection

Appendix A: Interview guidelines for the Pilot/Initial Analysis

Personal background

1. What is your position?
2. How long have you worked in that position?
3. How long have you worked with Frontline?

Implementation

4. In what way were you involved in the implementation process of CRM Frontline/CRM Siebel?
5. Describe the process of implementation from your perspective' how you were involved, dates, what happened, main issues why they occurred?
6. What were the strengths and weaknesses of the implementation of Frontline?
7. Have external end-users of the system been involved in the implementation process? Please elaborate how.
8. How would you implement it differently, if you were given free hands?

Knowledge management

9. Is there any explicit knowledge management process operating?
10. Does it cover how knowledge is created, shared, retained and exploited?
11. On what basis would you share knowledge and with who?
12. What sort of knowledge you would expect and what is not you getting?

Knowledge sharing

13. Have you learned any tricks of the trades; any workarounds during the implementation of the system?

14. Do you share the tricks of the trades with other stakeholders of the system?
15. Please describe the way in which you interact with other stakeholders of the system?
16. Do you socialise with other stakeholders of the system outside the working hours?
17. Is the knowledge captured on the operational side shared with the analytic/back-office side?

Please elaborate how?

Knowledge Retention

18. Are there any experts of the system and how is their expertise being taken advantage of?
19. Has the system changed over time?
20. Has the knowledge created through the interactions been captured to facilitate the changes in the system?
21. Is the system evolving according to the needs of your job?
22. Are the changes in the system acting as an enabler or as an inhibitor?

Evaluation

23. Which of the following statements describes the effectiveness of the system?

1. CRM system is an effective tool for the management to get an overview of customer care.
2. It has helped me with improving the speed of the work, accuracy, integration of customer information and customer intimacy.
3. It has improved the speed and accuracy considerably and has helped to integrate customer information.
4. Frontline/CRM Siebel has promoted customer centric connectivity, consistency and responsiveness.
5. Frontline has helped to provide a personalised and consistent customer care
6. Frontline has helped to create a 360- degree view of the customer.
7. If none of the above applies, please elaborate

24. In what way have you been benefited by your involvement with the system?
25. Could you please describe a working loop for example right from the stage a customer contacts BCC/IBM to the stage when a service has been delivered.
26. What, in your opinion are the inhibitors (sub-optimising factors) of Frontline?
27. Who is in control, people or the system? (Technical determinism)
28. Does the system meet the requirements of the job?
29. In what way do you think has the system enhanced/facilitated the quality of work?
30. Is the system meeting your expectations? Please elaborate.

Appendix B: Interview Guidelines for final Data Collection

Personal background

1. What is your position?
2. How long have you worked in that position?
3. How long have you worked with the CRM system?

IT History and external context

4. How much of the IT has been in sourced and how much has been outsourced and why?
5. What are the past successes and failures? Please elaborate
6. What environmental pressures were/are there and how are they effecting the IS strategy?
7. Has the technology matured?
8. How has the CRM market changed over time?
9. Is there anything distinctive and more difficult about CRM implementation?

Internal context

10. Has the in-house expertise increased over the past year?
11. What sort of reward systems are at place?
12. Has the interaction between the sub-cultures increased over time and why?
13. What methods are at put to practice to facilitate prolonged interactions between the sub-cultures?

Content Issues

14. **Nature of Technology**—refers to people's images of the technology and their understanding of its capabilities and functionality.

15. **(ii) Technology Strategy**—refers to people’s views of why their organization acquired and implemented the technology. It includes their understanding of the motivation or vision behind the adoption decision and its likely value to the organization.
16. **(iii) Technology in Use**—refers to people’s understanding of how the technology has been used on a day-to-day basis and the likely or actual conditions and consequences associated with such use.
17. Size, complexity, definitional uncertainty of system, technical uncertainty, no. of departments/units affected – effect on knowledge issues below.

Process of change

18. How is the change being managed in the post CRM implementation environment? For example, user involvement, project management, evaluation, application of learning, knowledge creation/retention, training, staff stability, levels of different stakeholder commitment

Knowledge management

19. Is there any explicit knowledge management process operating?
20. Does it cover how knowledge is created, shared, retained and exploited?
21. On what basis would you share knowledge and with who?
22. What sort of knowledge you would expect and what is not you getting?

Knowledge sharing

23. Have you learned any tricks of the trades; any workarounds during the implementation of the system?
24. Do you share the tricks of the trades with other stakeholders of the system?

25. Please describe the way in which you interact with other stakeholders of the system?
26. Do you socialise with other stakeholders of the system outside the working hours?
27. Is the knowledge captured on the operational side shared with the analytic/back-office side?

Please elaborate how?

Knowledge Retention

28. Are there any experts of the system and how is their expertise being taken advantage of?
29. Has the system changed over time?
30. Has the knowledge created through the interactions been captured to facilitate the changes in the system?
31. Is the system evolving according to the needs of your job?
32. Are the changes in the system acting as an enabler or as an inhibitor?

Evaluation

33. Which of the following statements describes the effectiveness of the system?

1. CRM system is an effective tool for the management to get an overview of customer care.
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3. It has improved the speed and accuracy considerably and has helped to integrate customer information.
4. CRM system has promoted customer centric connectivity, consistency and responsiveness.
5. CRM system has helped to provide a personalised and consistent customer care
6. CRM system has helped to create a 360- degree view of the customer.
7. If none of the above applies, please elaborate

34. In what way have you been benefited by your involvement with the system?
35. Could you please describe a working loop for example right from the stage a customer contacts the front-office to the stage when a service has been delivered.

36. What, in your opinion are the inhibitors (sub-optimising factors) of the CRM system?
37. Who is in control, people or the system? (Technical determinism)
38. Does the system meet the requirements of the job?
39. In what way do you think has the system enhanced/facilitated the quality of work?
40. Is the system meeting your expectations? Please elaborate.